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2006 Workplace and Gender Relations Survey of Active Duty Members

Report on Scales and Measures

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2006 WORKPLACE AND GENDER RELATIONS SURVEY OF ACTIVE DUTY MEMBERS: REPORT ON SCALES AND MEASURES

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The *2006 Workplace and Gender Relations Survey of Active Duty Personnel (2006 WGRA)* was conducted on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]). DMDC's survey program is conducted under the leadership of Timothy Elig, Chief Director, *Human Resources Strategic Assessment Program (HRSAP)*.

2006 WORKPLACE AND GENDER RELATIONS SURVEY OF ACTIVE DUTY MEMBERS

Executive Summary

In 2006, the Department of Defense (DoD) and Defense Manpower Data Center (DMDC) conducted the fourth DoD-wide survey on sexual harassment and other unwanted, gender-related experiences of active duty military members, the *2006 Workplace and Gender Relations Survey of Active Duty Members (2006 WGRA)*. New to this survey is a section about experiences of unwanted sexual contact. This report presents psychometric analyses of the constructed scales and measures in the *2006 WGRA* and results on scale development, as obtained from 26,225 respondents to the survey.

The first section of this report presents a general overview of the survey instrument using multiple item measures to assess unwanted, gender-related behaviors and workplace relations and provides an overview of the sample and survey. The body of the report is comprised of a description of each scale, including individual items, background information, and psychometric analyses.

The 16-page survey booklet included an in-depth series of questions concerning the active duty member's background, career intentions, workplace information, stress, health, and well-being, gender-related experiences in the military, and attitudes toward personnel policies and practices. Scales were composed of multiple items and reported results include reliability, frequency counts, and multivariate analyses, where appropriate. Scales, rather than single items, were utilized because measures that rely on multiple items to tap a construct of interest are more reliable than those relying on single items. Statistics are reported for men and women combined, as well as separately by gender.

Particular attention was paid to assessing unwanted, gender-related behavior, sexual harassment, and unwanted sexual contact. Historically, different methods of measuring sexual harassment rates have been employed in DoD-wide and Service-wide surveys. This has resulted in rates that were not comparable across surveys. In November 1998, the Deputy Assistant Secretary of Defense for Equal Opportunity (DASD[EO]) convened a meeting of Service and Reserve Component representatives to review existing measures and make recommendations for a standardized method for use in both DoD- and Service-wide surveys. The resulting measure is based on two survey questions that represent the "DoD Sexual Harassment Core Measure" (Survey Method for Counting Incidents of Sexual Harassment, 2002). The measure consisted of thirteen items—twelve items that measured unwanted, gender-related behaviors and one item that asked Service members whether they considered any of the core gender-related behaviors to have been sexual harassment. Together, these thirteen items are used to calculate the sexual harassment incident rate.

The *2006 WGRA* survey measured unwanted sexual contact for the first time in the family of workplace and gender relations surveys of active duty members. The methodology for assessing unwanted sexual contact was consistent with that used in the *Service Academy 2006 Gender Relations Survey (SAGR2006)*.

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2006 WORKPLACE AND GENDER RELATIONS SURVEY OF ACTIVE DUTY PERSONNEL

Introduction

The *2006 Workplace and Gender Relations Survey of Active Duty Members* is the fourth Department of Defense (DoD)–wide survey of active duty members that focuses on sexual harassment and gender issues and the first to include unwanted sexual contact. In general, it parallels the *2002 Status of the Armed Forces Survey–Workplace and Gender Relations (2002 WGR)*, which was the third DoD-wide survey of active duty members that focused on sexual harassment and gender issues. The first survey to assess sexual harassment and gender issues was fielded in 1988 and the second in 1995.¹ The 1995 survey (*1995 Form B*) was designed both to estimate the level of sexual harassment in the Services and provide new information on a variety of potential antecedents and consequences of harassment (Bastian, Lancaster, & Reyst, 1996). The new measures were intended to increase understanding of sexual harassment and of policies and programs that prevent it from occurring, as well as to gather information on a variety of workplace issues. Similar to the *2002 WGR*, the *2006 WGRA* was designed to take advantage of the developments in sexual harassment measurement technology that have occurred since 1995 and to utilize a standardized method for measuring and counting sexual harassment incidents.

New to the *2006 WGRA* is the assessment of unwanted sexual contact. The term “unwanted sexual contact” refers to a range of activities that the Uniform Code of Military Justice (UCMJ) prohibits, including unwanted sexual touching and sexual assault (see Items 56 and 57). Unwanted sexual contact is measured by a single item that was first employed in the *SAGR2006* survey (Lipari, Wessels, Cook, Jones, Pennington, & Kidwell, 2006). Following this single item is a multi-item measure that assesses the one experience of unwanted sexual contact that had the greatest effect on the respondent, and items assessing the events constituting that experience. Questions about help-seeking and the reporting process are also included in this section.

In keeping with previous surveys, the *2006 WGRA* uses multiple item measures to assess the antecedents of unwanted, gender-related behaviors, unwanted sexual contact, and workplace relations, as well as to assess outcomes before asking about unwanted, gender-related behaviors (Drasgow, Fitzgerald, Magley, Waldo, & Zickar, 1999; Fitzgerald, Drasgow, & Magley, 1999). Psychometric validation of the measures is provided in this report.

The *2006 WGRA* includes revisions to a number of scales used previously in the *2002 WGR*. These revisions (1) improve the measurement of unwanted, gender-related behaviors and workplace relations and their associated constructs from the *2002 WGR*, (2) include unwanted sexual contact with other unwanted, gender-related behaviors in items that assess perceptions of personnel policy and practices, and (3) shorten scales to reduce the burden on survey respondents. New scales were added to measure constructs of interest. In addition to unwanted sexual contact and related measures in the one situation with the greatest effect, scales new to the

¹ See Lancaster (1999) for a historical perspective of DoD-wide research about unwanted, gender-related behavior.

2006 WGRA include items that measure perceptions of safety from sexual harassment and sexual assault, perceived responsibility for sexual harassment and assault, and perceptions of positive leadership behavior in reducing sexual harassment and assault.

This report describes results of psychometric analyses of the scales and measures utilized in the *2006 WGRA*. The items included in each scale are listed, along with the scale's mean, standard deviation, standard error, and reliability. Results are presented for both men and women combined and separately by gender (see Magley, Waldo, Drasgow, & Fitzgerald, 1999).

Methodology

Sample Design and Survey Administration

The population of interest for the 2006 WGRA consisted of all active duty members of the Army, Navy, Marine Corps, Air Force, and Coast Guard, up to and including paygrade O-6 with at least 6 months of service at the time the survey was fielded.

The sample for the 2006 WGRA consisted of a non-proportional single-stage, stratified random sample of 86,213 active duty members. The stratification categories included Service, gender, paygrade group, and racial/ethnic group membership. Further details of the sample design are reported by DMDC (2007b).

Beginning on June 26, 2006, notification letters explaining the survey and soliciting participation were sent to sample members. The introductory letter was followed on August 1, 2006, by a package containing the questionnaire. Sample members had the option of taking the survey on the Web or returning a paper version of the survey by mail. Approximately two weeks later, letters were sent to thank individuals who had already returned the questionnaire and to ask those who had not completed and returned the survey to do so. At approximately two weeks and six weeks after the reminder/thank you letter mailing, second and third questionnaires with letters stressing the importance of the survey were mailed to individuals who had not responded to previous mailings. Three e-mails stressing the importance of the survey were sent every two weeks after the third wave of questionnaires to individuals who had not responded to previous mailings. Procedures were designed to maximize response rates.² The field closed on September 5, 2006; further information about survey administration is reported in DMDC (2007a).

A total of 26,225 eligible members returned usable surveys (men, $n = 18,508$, 70.57%, women, $n = 7,717$, 29.43%). Data were weighted to reflect the active duty population as of June 2006. A three-step process was used to produce final weights. The first step calculated base weights to compensate for variable probabilities of selection. The second step adjusted the base weights for nonresponse due to inability to determine the eligibility status of the sample members and due to the sample members failing to complete a survey. Finally, the nonresponse-adjusted weights were raked to force estimates to the known population totals as of the start of data collection (June 2006). The responses represent an adjusted weighted response rate of 30%. Complete details of weighting and response rates are reported by DMDC (2007b).

Survey Instrument

The 2006 WGRA was developed to provide users with timely, policy relevant information. The survey booklet was designed and formatted to facilitate ease and reliability of responding and to minimize possible response bias and demand effects. It was constructed around a core of questions grouped into six general sections. The 16-page survey booklet appears in Appendix C.

² With the exception of the first notification letter, each letter included an invitation to the respondent to complete the survey on the Web, rather than completing the paper version. E-mail reminders asked the respondent to either fill in the paper survey that had been mailed to him/her or to take the survey on the Web.

- **Background**-Service, gender, paygrade, race/ethnic status, and duty location.
- **Career Intention**-length of time in service, intentions to stay on active duty, and commitment to the military.
- **Military Life**-military duties, and perceptions of safety and responsibility related to sexual harassment and sexual assault.
- **Workplace Information**-the military workplace, satisfaction with supervisors, coworkers, one's work and job, military readiness and morale, and unit cohesion.
- **Stress, Health, and Well-Being**-individual stress and physical health.
- **Unwanted Gender-Related Experiences in Military**-the extent to which gender-related experiences, including sexual harassment, were reported, and, if reported, members' satisfaction with the complaint process and outcomes.
- **Unwanted Sexual Contact**-the extent to which experiences with unwanted sexual contact were reported, and if reported, members' satisfaction with support services and the complaint process.
- **Personnel Policy and Practices**-amount of training on sexual harassment and sexual assault, members' assessment of the effectiveness of training received, and members' views on current policies designed to prevent or reduce sexual harassment and sexual assault.

Survey content was developed based on input from various academics, representatives from policy offices of the Office of the Under Secretary of Defense for Personnel and Readiness, and Service representatives. Survey content was informed by findings from focus groups that were held with active duty members. Additionally, content for the measure of unwanted sexual contact was informed by findings from focus groups conducted with students at the Service Academies.

Results

This report contains descriptions of the major scales, in the order in which they appear in the questionnaire, including the items within each scale, internal consistency reliability estimates (Cronbach's coefficient α), means, standard deviations, standard errors, and frequency counts for selected scales. Results of multivariate analyses are reported for longer or multidimensional scales. Scales utilized in previous DoD-wide gender issue surveys, and scales derived from published measures are identified in the scale descriptions.

Each scale is composed of multiple items to measure the theoretical construct of interest. Wherever possible, existing scales were designed to be comparable to previous surveys tapping gender and workplace relations, particularly the 2002 WGR.³ When feasible, scales were drawn from the psychological literature and adapted for use in a military setting, or were employed from previous military surveys (e.g., the 2002 WGR; the 2004 *Workplace and Gender Relations Survey of Reserve Component Members* [2004 WGR]; the 2005 *Workplace and Equal Opportunity Survey of Active-Duty Members* [2005 WEOA]; the SAGR2006). Where existing measures were not available, items were developed by subject matter experts to tap the construct of interest in the 2006 WGRA.

Analyses were conducted on surveys determined to be usable based on whether respondents completed at least 50% of all items that they were eligible to answer and answered at least one item on the Unwanted, Gender-Related Behaviors scale (Item 35). Table 1 provides information about whether the scales were relatively homogenous and internally consistent. The internal consistency reliability estimates (i.e., Cronbach's coefficient α) are listed for each scale for the total sample and by gender, based on calculations using SPSS 14.0.1 software.

Table 2 provides the means, standard deviations, and standard errors for each scale by gender, all computed using weighted data. The means reported in Table 2 were obtained by summing the item scores for each scale described below. The means are based on those individuals who had completed at least 50% of the data points unless otherwise indicated.

In addition, a second method was used to calculate the means for Item 35. In this method, means were calculated following data imputation in which the following process was employed: for each subscale, the respondent was required to have responded to at least one item on the subscale; if there were one or more responses, means were calculated based on the number of data points completed. This process was used to maintain consistency with the frequency counts reported in Table 3 and with the frequency counts reported for the 2004 WGR, the 2002 WGR, and the 1995 *Form B* (Bastian, Lancaster, & Reyst, 1996). Thus, the means, standard deviations, and standard errors for Item 35 were calculated using two different methods and are reported as such in Table 2. The means were calculated on the weighted data using PROC SURVEYMEANS in SAS V9.01. Standard errors of the means were computed by SAS PROC SURVEYMEANS adjusting for nonrandom sampling. The standard deviations were computed by SAS PROC MEANS and were weighted irrespective of strata with the sum of the weights as the divisor.

³ See Willis, Mohamed, and Lipari (2002) for a description of how the survey content for the 2002 WGR survey was developed and Ormerod et al. (2003) for a description of the constructed scales and measures.

Table 3 presents the frequency counts, expressed as percentages, for scales measuring discrimination; the DoD Sexual Harassment Core Measure; unwanted, gender-related behavior; the “One Situation” related to unwanted, gender-related behavior; retaliation related to reporting the “One Situation”; unwanted sexual contact; and the “One Situation” related to unwanted sexual contact. Percentages were calculated in SAS V9.01 using weighted data. Percentages for the full discrimination scale (Items 33A-LN, 34A) were calculated using a counting method described with Items 33 and 34 in a later section of this report. Percentages for the discrimination subscales (Item 33) were calculated for those respondents who had at least one completed data point. Percentages for the unwanted, gender-related behavior subscales (Item 35), with the exception of the DoD Sexual Harassment Core Measure, reflect those respondents who experienced one or more incident on the particular subscale being reported. Percentages for the DoD Sexual Harassment Core Measure were calculated using a counting algorithm described with Items 35 and 36 in a later section of this report. Likewise, percentages for the “One Situation” related to unwanted, gender-related behavior, retaliation related to reporting the “One Situation,” unwanted sexual contact, and the “One Situation” related to unwanted sexual contact were calculated using counting methods described in later sections of this report for Items 37, 54, 56, and 57, respectively.

Confirmatory factor analyses were conducted for longer scales to examine the number of factors or dimensions per scale. All confirmatory factor analyses were performed using PRELIS 2.30 and LISREL 8.30 (Jöreskog & Sörbom, 1993).

When conducting confirmatory factor analysis (CFA) or structural equation modeling (SEM), fit statistics are used to evaluate whether a specified model adequately fits the data. There are numerous fit statistics to choose from and little agreement exists about which indices are best (Klem, 2000). Compounding the issue of which index to report, the literature routinely offers guidance about cut scores for interpreting fit statistics (e.g., Byrne, 1998), but provides little discussion about the strengths and weaknesses associated with particular fit statistics. This has led to subjective interpretation of fit statistics. Issues to consider when evaluating whether a fit statistic is appropriate to report include sample size and non-normality of the observed data. Real-world data are often non-normal, and the data from the 2006 WGRA are no exception. Various authors (e.g., Byrne, 1998; Klem, 2000) recommend taking a holistic approach when evaluating SEM and CFA models. This holistic approach includes examining fit statistics, but not neglecting other important features that indicate the acceptability of the model, such as the plausibility of parameter estimates, the size of standard errors, and theoretical criteria. Thus, conclusions about the adequacy of a model are based on an accumulation of evidence rather than a particular cut score (Klem, 2000). Given the current lack of knowledge about using SEM and CFA with discrete item response data, it is necessary to consider all aspects of model fit rather than to rely solely on fit statistics and particular cutoff scores alone. Often, a researcher must accumulate and rely on experience in SEM and CFA applications to determine a “good fit” statistic for a particular type of data. An expanded discussion about fit statistics can be found in Appendix A.

Items 25A through 25P are copyrighted and will not be addressed in this report. For information on the psychometric properties of these items please contact the appropriate

copyright holder.⁴ Other items were intended as single-item indicators (e.g., Item 51) and are not reported in this document. Items intended to function as checklists (e.g., Items 48, 55, and 76) may be discussed, but will not include psychometric documentation.

Table 1.
Reliability Estimates for Scales Constructed from the 2006 WGRA

Scale	Cronbach α for Total Sample	Cronbach α for Women	Cronbach α for Men
Overall Organizational Commitment (9A-O)	.88	.89	.87
Affective Commitment (9A,B,E,H,J,M)	.88	.89	.88
Continuance Commitment (9C,F,I,L,N)	.78	.78	.77
Normative Commitment (9D,G,K)	.79	.79	.78
Perceived Safety from Sexual Harassment (15A-I)	.99	.97	.995
Perceived Safety from Sexual Harassment Factor 1 (15A-G)	.99	.97	.995
Perceived Safety from Sexual Harassment Factor 2 (15H-I)	.99	.95	.995
Perceived Safety from Sexual Assault (16A-I)	.99	.98	.997
Perceived Safety from Sexual Assault Factor 1 (16A-G)	.99	.98	.998
Perceived Safety from Sexual Assault Factor 2 (16H-I)	.99	.95	.995
Perceived Responsibility for Sexual Harassment/Assault (17A-E)	.68	.64	.69
Perceived Responsibility for Sexual Harassment/Assault Factor 1 (17A-B)	.57	.57	.53
Perceived Responsibility for Sexual Harassment/Assault Factor 2 (17C-E)	.87	.85	.87
Supervisor Satisfaction (21A-F)	.96	.96	.96
Careerism (22A-D, F)	.85	.85	.84
Leadership (22B-D, F)	.82	.82	.82
Coworker Satisfaction (24A-E)	.91	.91	.90
Work Satisfaction (26A-E)	.93	.93	.93
Unit Cohesion (29A-D)	.92	.92	.91
Perceived Stress (30A-J)	.87	.88	.86
General Health (31A-D)	.79	.80	.78
Discrimination (33A-K, LN)	.81	.82	.80
Evaluation Discrimination (33A-D)	.61	.66	.57
Assignment Discrimination (33E-G, LN)	.65	.66	.64
Career Discrimination (33H-K)	.69	.71	.67
Sexist Behavior (35B,D,G,I)	.87	.89	.76
Crude/Offensive Behavior (35A,C,E,F)	.87	.89	.82

⁴ Items 25A through 25P are used by permission of the copyright holder, The Gallup Organization, 901 F Street NW, Washington, DC 20004.

Scale	Cronbach α for Total Sample	Cronbach α for Women	Cronbach α for Men
Unwanted Sexual Attention (35H,J,M,N)	.88	.87	.88
Sexual Coercion (35K,L,O,P)	.93	.90	.97
Sexual Assault (35R,S)	.88	.77	.95
Behaviors Indicative of Sexual Harassment (35A,C,E,F,H,J-P)	.90	.91	.88
Subjective Distress (38A-F)	.90	.89	.88
Subjective Distress I (38A,C,D,E)	.89	.88	.88
Subjective Distress II (38B,F)	.86	.85	.87
Satisfaction with Reporting and Outcome (52, 53A-E)	.92	.92	.93
Leadership Efforts to Stop Sexual Harassment (77A,B,C)	.88	.86	.89
Organizational Tolerance of Sexual Harassment/Assault (78A-E)	.78	.81	.74
Provision of Resources (79A-E)	.91	.91	.91
Sexual Harassment Training and Education (82A-G)	.96	.95	.96
Sexual Assault Training and Education (86A-G)	.97	.97	.97

Note. Item numbers are shown in parentheses following the scale name. The coefficient alphas for the Sexual Assault scale (35R,S) are based on two items with extreme base rates and, thus, should be interpreted with extreme caution. Scores on the Behaviors Indicative of Sexual Harassment scale are not equivalent to the DoD metric for assessing or reporting Sexual Harassment because it does not include Item 36.

Table 2.
Scale Ranges, Means, Standard Deviations, and Standard Errors

Scale	Range	Women			Men		
		Mean	SD ^a	SE ^b	Mean	SD ^a	SE ^b
Overall Organizational Commitment (9A-O)	1-5	3.14	.70	.01	3.23	.71	.01
Affective Commitment (9A,B,E,H,J,M)	1-5	3.77	.79	.01	3.89	.80	.01
Continuance Commitment (9C,F,I,L,N)	1-5	2.77	.87	.01	2.78	.88	.01
Normative Commitment (9D,G,K)	1-5	2.5	.93	.01	2.61	.98	.01
Other Commitment (9O)	1-5	3.17	1.32	.02	3.42	1.33	.02
Perceived Safety from Sexual Harassment (15A-I)	1-5	3.37	1.14	.02	3.94	1.51	.02
Perceived Safety from Sexual Harassment Factor 1 (15A-G)	1-5	3.40	1.17	.02	3.94	1.52	.02
Perceived Safety from Sexual Harassment Factor 2 (15H-I)	1-5	3.24	1.21	.02	3.94	1.52	.02
Perceived Safety from Sexual Assault (16A-I)	1-5	3.43	1.18	.02	4.04	1.47	.02
Perceived Safety from Sexual Assault Factor 1 (16A-G)	1-5	3.48	1.20	.02	4.04	1.48	.02
Perceived Safety from Sexual Assault Factor 2 (16H-I)	1-5	3.28	1.22	.02	4.02	1.48	.02

Scale	Range	Women			Men		
		Mean	SD ^a	SE ^b	Mean	SD ^a	SE ^b
Perceived Responsibility for Sexual Harassment/Assault (17A-E)	1-5	2.88	.91	.02	3.29	.87	.01
Perceived Responsibility for Sexual Harassment/Assault Factor 1 (17A-B)	1-5	4.29	.88	.01	4.33	.92	.01
Perceived Responsibility for Sexual Harassment/Assault Factor 2 (17C-E)	1-5	3.73	.67	.01	3.91	.70	.01
Supervisor Satisfaction (21A-F)	1-5	3.82	1.05	.01	4.00	.98	.01
Careerism (22A-D, F)	1-5	2.69	.94	.01	2.59	.92	.01
Leadership (22B-D, F)	1-5	3.21	.98	.01	3.29	.98	.01
Coworker Satisfaction (24A-E)	1-5	3.56	.87	.01	3.78	.79	.01
Work Satisfaction (26A-E)	1-5	3.66	.96	.01	3.73	.99	.01
Unit Cohesion (29A-D)	1-5	3.38	.87	.01	3.64	.82	.01
Perceived Stress (30A-J)	1-5	2.61	.71	.01	2.51	.71	.01
General Health (31A-D)	1-4	3.22	.61	.01	3.31	.56	.01
Behaviors Indicative of Sexual Harassment (35A,C,E,F,H,J-P)	1-5	1.31	.53	.01	1.12	.33	.00
Sexist Behavior (35B,D,G,I)	1-5	1.61	.88	.01	1.16	.43	.01
Crude/Offensive Behavior (35A,C,E,F)	1-5	1.56	.82	.01	1.24	.56	.01
Unwanted Sexual Attention (35H,J,M,N)	1-5	1.29	.63	.01	1.06	.32	.00
Sexual Coercion (35K,L,O,P)	1-5	1.09	.38	.01	1.04	.28	.00
Sexual Assault (35R,S)	1-5	1.05	.28	.00	1.03	.26	.00
Subjective Distress (38A-F)	1-5	2.52	1.08	.02	1.88	.99	.02
Subjective Distress I (38A,C,D,E)	1-5	2.89	1.21	.02	2.13	1.17	.03
Subjective Distress II (38B,F)	1-5	1.78	1.08	.02	1.40	.84	.02
Satisfaction with Reporting and Outcome (52, 53A-E)	1-5	2.85	1.20	.14	3.02	1.06	.10
Leadership Efforts to Stop Sexual Harassment (77A,B,C)	1-3	2.52	.61	.01	2.66	.56	.01
Organizational Tolerance of Sexual Harassment/Assault (78A-E)	1-5	2.22	.90	.01	1.91	.84	.01
Provision of Resources (79A-E)	1-5	2.00	1.00	.01	1.81	.96	.01
Sexual Harassment Training and Education (82A-G)	1-5	4.35	.68	.01	4.43	.67	.01
Sexual Assault Training and Education (86A-G)	1-5	4.42	.68	.01	4.46	.65	.01

Note. For Item 35 the means, standard deviations, and standard errors were calculated using data imputation described in the results. Scores on the Behaviors Indicative of Sexual Harassment scale are not equivalent to the DoD metric for assessing or reporting Sexual Harassment because it does not include Item 36.

^aStandard deviations were computed by SAS PROC MEANS. The standard deviations are weighted irrespective of strata with the sum of the weights as the divisor.

^bStandard error of the mean was computed by SAS PROC SURVEYMEANS, adjusting for nonrandom sampling.

Table 3.

Incident Rates for Gender Discrimination, Unwanted, Gender-Related Behaviors, DoD Sexual Harassment Core Measure, the “One Situation” for Unwanted, Gender-Related Behaviors, Sexual Harassment Retaliation, Unwanted Sexual Contact Core Measure, and the “One Situation” for Unwanted Sexual Contact

Scale	Women	Men
Discrimination (33A-LN; 34A) ^a	13%	2%
Evaluation Discrimination (33A-D)	10%	4%
Assignment Discrimination (33E-G, LN)	8%	2%
Career Discrimination (33H-K)	8%	2%
DoD Sexual Harassment Core Measure (35A,C,E,F,H,J-P; 36)	32%	6%
Sexist Behavior (35B,D,G,I)	53%	21%
Crude/Offensive Behavior (35A,C,E,F)	51%	28%
Unwanted Sexual Attention (35H,J,M,N)	30%	7%
Sexual Coercion (35K,L,O,P)	9%	3%
Sexual Assault (35R,S)	5%	2%
Other Behavior (35T)	5%	3%
Behaviors Indicative of Sexual Harassment (35A,C,E,F,H,J-P)	54%	29%
One Situation Sexual Harassment (37A-E)	76%	46%
Sexist Behavior (37A)		
Yes	37%	9%
No	61%	89%
No Response	2%	2%
Crude/Offensive Behavior (37B)		
Yes	44%	36%
No	54%	64%
No Response	2%	1%
Unwanted Sexual Attention (37C)		
Yes	27%	6%
No	70%	92%
No Response	3%	2%
Sexual Coercion (37D)		
Yes	6%	2%
No	91%	96%
No Response	4%	2%
Other Behavior (37E)		
Yes	9%	7%
No	81%	87%
No Response	10%	6%
Sexual Harassment Retaliation (54A-B)	60%	53%
Professional Retaliation (54A)		
Yes	32%	51%
No	64%	48%

Scale	Women	Men
Don't Know	3%	1%
No Response	1%	0%
Social Retaliation (54B)		
Yes	54%	29%
No	41%	61%
Don't Know	4%	4%
No Response	1%	6%
Unwanted Sexual Contact (56)	7%	2%
One Situation Unwanted Sexual Contact (57A-E)	88%	74%
Unwanted Sexual Touching (57A)		
Yes	75%	64%
No	22%	32%
No Response	3%	3%
Attempted Unwanted Sexual Intercourse (57B)		
Yes	39%	26%
No	55%	71%
No Response	6%	3%
Completed Unwanted Sexual Intercourse (57C)		
Yes	16%	11%
No	80%	83%
No Response	4%	6%
Attempted Unwanted Sodomy (57D)		
Yes	23%	25%
No	73%	71%
No Response	4%	3%
Completed Unwanted Sodomy (57E)		
Yes	16%	11%
No	81%	83%
No Response	4%	6%

Note. Survey measurement of sexual harassment is defined by the U.S. Department of Defense as the presence of behaviors indicative of sexual harassment (Crude/Offensive Behavior, Sexual Coercion, and Unwanted Sexual Attention) and the labeling of those behaviors as sexual harassment (Survey Method for Counting Incidents of Sexual Harassment, 2002). Sexist Behavior and Sexual Assault are not counted in the DoD survey measure of sexual harassment. Scores on the Behaviors Indicative of Sexual Harassment scale are not equivalent to the DoD metric for assessing or reporting Sexual Harassment because it does not include Item 36.

^a Overall gender discrimination is defined here as the presence of behaviors indicative of discrimination due to one's gender and the labeling of those behaviors as discrimination due to one's gender (Item 34). Subscales of gender discrimination (Evaluation, Assignment, and Career Discrimination) do not include Item 34.

Scales in the Retention and Commitment Section

Item 9, Organizational Commitment. In Items 9A-O, survey participants were asked to indicate the extent to which they agreed with statements about their Service (see Table 4). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score denotes a higher degree of commitment to one's Service.

Organizational commitment is a construct that represents an employee's degree of allegiance to their organization, in this case the military. Research has found that organizational commitment is multidimensional in nature and has been conceived of as having three components: affective, continuance, and normative commitment (Meyer & Allen, 1997). Affective commitment indicates that employees continue to work at an organization because they want to (i.e., they have an "affective" attachment to their organization). Continuance commitment indicates that employees work at an organization because they view the benefits of staying in the organization as outweighing the costs of leaving (i.e., "continuance" is less costly than leaving). Normative commitment indicates that employees stay in an organization because they feel they ought to do so (i.e., they have "norms" or values that sustain their commitment).

The current scale assesses affective, continuance, and normative commitment. The scale was developed by members of the Military Family Research Institute (H. M. Weiss, personal communication, May 8, 2006). Items 9A-O were included on the 2005 WEOA survey (Ormerod et al., 2006). Item 9N⁵ was included in the 2004 WGRR (Ormerod et al., 2004). Item 9H is similar to an item found in Mowday, Steers, and Porter's (1979) Organizational Commitment Questionnaire. Items 9D and 9G are from Meyer and Allen's (1997) normative commitment scale and were piloted on a military population (Ormerod, Lee, Fitzgerald, & Drasgow, 2001) and Items 9F and 9L are similar to items found in Meyer and Allen's continuance commitment scale.

For Organizational Commitment (9A-O), alpha coefficients were .88 for the total sample, .89 for women, and .87 for men (see Table 1). Alpha coefficients for the Affective Commitment scale (Items 9A, 9B, 9E, 9H, 9J, 9M) were .88 for the total sample, .89 for women, and .88 for men (see Table 1). Alpha coefficients for the Continuance Commitment scale (Items 9C, 9F, 9I, 9L, 9N) were .78 for the total sample, .78 for women, and .77 for men (see Table 1). For Normative Commitment (Items 9D, 9G, 9K), alpha coefficients were .79 for the total sample, .79 for women, and .78 for men (see Table 1).

A one-factor and a three-factor confirmatory factor analysis (CFA) were fit to the data. The one-factor CFA fit poorly, for example, RMSEA = .22, NNFI = .76, SRMR = .15, GFI = .65, AGFI = .52, and CFI = .80 for the total sample. The three-factor CFA reflected affective, continuance, and normative commitment (see Table 4) and fit moderately well. For example, RMSEA = .11, NNFI = .92, SRMR = .10, GFI = .88, AGFI = .83, and CFI = .93 for the total sample (see Appendix A).

Recommendations for this scale include dropping Item 9O because it is not conceptualized as part of affective, continuance, or normative commitment.

⁵ In Item 9N on the 2004 WGRR, the response option originally ranged from *strongly disagree* to *strongly agree* and was listed as "One of the problems with leaving my Reserve component would be the lack of available alternatives."

Table 4.
Scale Items Measuring Organizational Commitment

<i>Affective Commitment</i>	
9A	I enjoy serving in the military
9B	Serving in the military is consistent with my personal goals
9E	Generally, on a day-to-day basis, I am happy with my life in the military
9H	I really feel as if the military's values are my own
9J	Generally, on a day-to-day basis, I am proud to be in the military
9M	I feel like being a member of the military can help me achieve what I want in life
<i>Continuance Commitment</i>	
9C	If I left the military I would feel like I'm starting all over again
9F	It would be difficult for me to leave the military and give up the benefits that are available in the Service
9I	I would have difficulty finding a job if I left the military
9L	I continue to serve in the military because leaving would require considerable sacrifice
9N	One of the problems with leaving the military would be the lack of available alternatives
<i>Normative Commitment</i>	
9D	I would feel guilty if I left the military
9G	I would not leave the military right now because I have a sense of obligation to the people in it
9K	If I left the military, I would feel like I had let my country down
<i>Other</i>	
9O	I am committed to making the military my career

Scales in the Military Life Section

Item 15, Perceived Safety from Sexual Harassment. In Items 15A-I, survey participants were asked to indicate the extent to which they felt safe from sexual harassment at different times, on and off duty, and on or off base/installation/ship (see Table 5). Response options ranged from 1 (*not at all*) to 5 (*very large extent*). A higher score denotes a higher perception of safety from sexual harassment.

The Perceived Safety from Sexual Harassment scale consists of nine items similar to items first used in the *SAGR2006* (Lipari et al., 2006). The items were modified to make them appropriate for active duty Service members as opposed to students at the Academies.⁶

⁶ For example, Item 15E was listed as "On Academy grounds, in dorm/barracks/living and sleeping area" in *SAGR2006*.

For Perceived Safety from Sexual Harassment total score (15A-I), alpha coefficients were .99 for the total sample, .97 for women, and .995 for men (see Table 1). Alpha coefficients for Factor 1 of the Perceived Safety from Sexual Harassment (Items 15A-G) were .99 for the total sample, .97 for women, and .995 for men (see Table 1). Alpha coefficients for Factor 2 of the Perceived Safety from Sexual Harassment (Items 15H-I) were .99 for the total sample, .95 for women, and .995 for men (see Table 1).

These items appear to be highly correlated, thus making them redundant. The correlations ranged from .86 to .98 among the nine items for the total sample, from .92 to .99 for the men, and from .62 to .92 for the women. Further, the pattern of correlations suggests that respondents answered in the same manner based on the first part of the item (e.g., “OFF DUTY away from your base/installation/ship”) making additional distinctions about time or location unnecessary (e.g., “during the day,” “in your barracks/housing area”). For example, the correlation for women for Items 15H and 15I was .91.

Based on an exploratory factor analysis of responses, two CFA’s using maximum likelihood estimation were carried out to fit the data to both a one-factor and a two-factor structure (Sexual Harassment Safety 1, Items 15A-G; Sexual Harassment Safety 2, Items 15H-I). Both of the CFA’s fit poorly, though the two factor CFA fit better than the one factor for both men and women. For the one factor CFA for the men, for example, RMSEA = .41, NNFI = .82, SRMR = .03, GFI = .50, AGFI = .17, and CFI = .87, while the two factor CFA, RMSEA = .30, NNFI = .89, SRMR = .03, GFI = .66, AGFI = .40, and CFI = .92. For the one factor for the women, RMSEA = .27, NNFI = .89, SRMR = .06, GFI = .69, AGFI = .48, and CFI = .92, while the two factor CFA, RMSEA = .21, NNFI = .94, SRMR = .05, GFI = .80, AGFI = .66, and CFI = .96 (see Appendix A).

Recommendations for this scale include shortening the scale to the following three items: “on base/installation/ship,” “on duty away from your base/installation/ship,” and “off duty away from your base/installation/ship.”

Table 5.
Scale Items Measuring Perceived Safety from Sexual Harassment

<i>Perceived Safety from Sexual Harassment</i>	
15A	ON base/installation/ship <u>during the day</u>
15B	ON base/installation/ship, <u>during the evening</u>
15C	ON base/installation/ship, <u>after lights out</u>
15D	ON base/installation/ship, <u>during the weekend</u>
15E	ON base/installation/ship, <u>in</u> your barracks/housing area
15F	ON base/installation/ship, <u>not in</u> your barracks/housing area
15G	ON DUTY away from your base/installation/ship (e.g., on patrol or being a part of a convoy)
15H	OFF DUTY away from your base/installation/ship, <u>during the day</u>
15I	OFF DUTY away from your base/installation/ship, <u>during the evening</u>

Item 16, Perceived Safety from Sexual Assault. In Items 16A-I, survey participants were asked to indicate the extent to which they felt safe from sexual assault at different times, on and off duty, and on or off base/installation/ship (see Table 6). Response options ranged from 1 (*not at all*) to 5 (*very large extent*). A higher score denotes a higher perception of safety from sexual assault.

The Perceived Safety from Sexual Assault scale consists of nine items similar to items first used in the *SAGR2006* (Lipari et al., 2006). The items were modified to make them appropriate for active duty Service members as opposed to students at the Academies.⁷

For Perceived Safety from Sexual Assault total score (16A-I), alpha coefficients were .99 for the total sample, .98 for women, and .997 for men (see Table 1). Alpha coefficients for Factor 1 of the Perceived Safety from Sexual Assault (Items 16A-G) were .99 for the total sample, .98 for women, and .998 for men (see Table 1). Alpha coefficients for Factor 2 of the Perceived Safety from Sexual Assault (Items 16H-I) were .99 for the total sample, .95 for women, and .995 for men (see Table 1).

These items appear to be highly correlated, thus making them redundant. The correlations ranged from .89 to .98 among the nine items for the total sample, from .95 to .995 for the men, and from .67 to .94 for the women. Further, the pattern of correlations suggests that respondents answered in the same manner based on the first part of the item (e.g., “ON base/installation/ship”) making additional distinctions about time or location unnecessary (e.g., “during the evening,” “not in your barracks/housing area”). For example, the correlation for women for Items 16A and 16B was .90.

Based on an exploratory factor analysis of responses, two CFA’s using maximum likelihood estimation were carried out fitting both a one-factor and a two-factor structure to the

⁷ For example, Item 16C was listed as “On Academy grounds, after lights out” in *SAGR2006*.

data (Sexual Assault Safety 1, Items 16A-G; Sexual Assault Safety 2, Items 16H-I). Both of the CFA's fit poorly, though the two-factor CFA fit better than the one factor for both men and women. For the one-factor CFA for the men, for example, RMSEA = .36, NNFI = .87, SRMR = .01, GFI = .57, AGFI = .28, and CFI = .91. For the two-factor CFA, RMSEA = .27, NNFI = .92, SRMR = .01, GFI = .70, AGFI = .49, and CFI = .95. For the one-factor CFA for the women, RMSEA = .26, NNFI = .91, SRMR = .04, GFI = .72, AGFI = .53, and CFI = .93. For the two-factor CFA for the women, RMSEA = .21, NNFI = .94, SRMR = .03, GFI = .80, AGFI = .66, and CFI = .96 (see Appendix A).

Recommendations for this scale include shortening the scale to the following three items: "on base/installation/ship," "on duty away from your base/installation/ship," and "off duty away from your base/installation/ship."

Table 6.
Scale Items Measuring Perceived Safety from Sexual Assault

<i>Perceived Safety from Sexual Assault</i>	
16A	ON base/installation/ship <u>during the day</u>
16B	ON base/installation/ship, <u>during the evening</u>
16C	ON base/installation/ship, <u>after lights out</u>
16D	ON base/installation/ship, <u>during the weekend</u>
16E	ON base/installation/ship, <u>in</u> your barracks/housing area
16F	ON base/installation/ship, <u>not in</u> your barracks/housing area
16G	ON DUTY away from your base/installation/ship (e.g., on patrol or being a part of a convoy)
16H	OFF DUTY away from your base/installation/ship, <u>during the day</u>
16I	OFF DUTY away from your base/installation/ship, <u>during the evening</u>

Item 17, Perceived Responsibility for Sexual Harassment/Assault. In Items 17A-E, survey participants were asked to indicate the extent to which they agreed with questions about sexual harassment/assault in the military (see Table 7). Response options ranged from 1 (*not at all*) to 5 (*very large extent*). Item 17A was reverse scored. A higher score denotes a military culture more intolerant of sexual harassment/assault.

The Perceived Responsibility for Sexual Harassment/Assault scale consists of five items loosely based on items first used in the *SAGR2006* (Lipari et al., 2006). The items were modified to make them appropriate for active duty Service members as opposed to students at the Academies.⁸

⁸ For example, Item 17B was listed as "Do students at your Academy feel comfortable reporting sensitive issues, such as discrimination, harassment, or sexual assault to Academy staff" in the *SAGR2006*.

For Perceived Responsibility for Sexual Harassment/Assault Total Scale (Items 17A-E), alpha coefficients were .68 for the total sample, .64 for women, and .69 for men. For Perceived Responsibility for Sexual Harassment/Assault Factor 1 (Items 17A-B), alpha coefficients were .57 for the total sample, .57 for women, and .53 for men. Alpha coefficients for Sexual Harassment/Assault Factor 2 (Items 17 C-E) were .87 for the total sample, .85 for women, and .87 for men.

Psychometrically, these five items do not appear to constitute a scale. In addition, it is unclear from the content of the items the construct that is being measured. Recommendations for this scale include dropping it from future use.

Table 7.

Scale Items Measuring Perceived Responsibility for Sexual Harassment/Assault

<i>Perceived Responsibility for Sexual Harassment/Assault</i>	
17A	Do people in the military who sexually harass others get away with it?
17B	Do people in the military feel comfortable reporting sensitive issues to authorities, such as discrimination, harassment, or sexual assault?
17C	Would you feel responsible for stopping another Service member from having sex with someone who seems too intoxicated to consent?
17D	Would you feel responsible for stopping another Service member who is sexually harassing other(s)?
17E	Would you feel responsible to get help (e.g., medical, psychological) for another Service member who had been sexually assaulted?

Scales in the Workplace Information Section

Item 21, Supervisor Satisfaction. In Items 21A-F, survey participants were asked to indicate the extent to which they agreed with statements about their supervisor (see Table 8). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score denotes a higher degree of satisfaction with one's supervisor.

The Supervisor Satisfaction scale consists of six items similar to items first used in the *1995 Form B* (Drasgow et al., 1999)⁹ and can be found on subsequent workplace surveys. Job satisfaction, a construct that includes satisfaction with supervisors, coworkers, and work, has long been considered an important variable in organizational research (e.g., Smith, Kendall, & Hulin, 1969). Job satisfaction has been found to predict job-related behaviors such as work withdrawal and job withdrawal (the former includes behaviors such as neglecting inessential

⁹ In Items 21A-F the response options originally ranged from “*very large extent*” to “*not at all*” and were phrased as questions in the *1995 Form B*. For example, Item 21A was originally listed as “Do you trust your supervisor?” in the *1995 Form B*.

tasks, doing poor quality work, and taking long work breaks, whereas the latter refers to intentions to be absent, self-reported absenteeism, intentions to quit, and thinking about quitting).

Alpha coefficients for the total sample, women, and men were all .96 (see Table 1).

A one-factor CFA was fit to the data and this model fit moderately well. For example, RMSEA = .11, NNFI = .98, SRMR = .01, GFI = .96, AGFI = .91, and CFI = .99 in the total sample (see Appendix A). There are no recommendations for modifications to this scale.

Table 8.
Scale Items Measuring Supervisor Satisfaction

<i>Supervisor Satisfaction</i>	
21A	You trust your supervisor
21B	Your supervisor ensures that all assigned personnel are treated fairly
21C	There is very little conflict between your supervisor and the people who report to him/her
21D	Your supervisor evaluates your work performance fairly
21E	Your supervisor assigns work fairly in your work group
21F	You are satisfied with the direction/supervision you receive

Item 22, Careerism. In Items 22A-22D and 22F, survey participants were asked to rate the degree to which they agreed with statements regarding their supervisors and other leaders (see Table 9). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Items 22A and 22C were reverse coded. Higher scores indicate higher perceptions of careerism among military members.

This scale was created as a behavioral measure of careerism for the *July 2002 Status Of Forces Survey Active Duty* to assess “the extent to which certain leaders put their careers ahead of all else” (Survey Results-Zero Defect and Related Measures, 2002). Items 22A and 22C are examples of leadership in “high performing” organizations, whereas Items 22B, 22D, and 22F reflect typical leadership behavior associated with careerism.¹⁰ Item 22E is a general item and was included as a balance between negative and positive items and is not used in the calculation of the careerism scale because it does not contribute significant psychometric information to the scale.

Alpha coefficients were .85 for the total sample, .85 for women, and .84 for men were (see Table 1).

¹⁰ Several items were modified to fit the military context (e.g., Item 22B originally read “Leaders in your unit are more interested in looking good than being good”).

A one-factor CFA was fit to the data and this model fit moderately well. For example, RMSEA = .18, NNFI = .88, SRMR = .07, GFI = .94, AGFI = .81, and CFI = .94 in the total sample (see Appendix A). There are no recommendations for modifications to this scale.

Table 9.
Scale Items Measuring Careerism

<i>Careerism</i>	
22A ^a	If you make a request through channels in your work group, you know somebody will listen
22B	The leaders in your work group are more interested in looking good than being good
22C ^a	You would go for help with a personal problem to people in your chain-of-command
22D	The leaders in your work group are not concerned with the way Service members treat each other as long as the job gets done
22E ^b	You are impressed with the quality of leadership in your work group
22F	The leaders in your work group are more interested in furthering their careers than in the well-being of their Service members

^aReverse coded.

^b Omitted from final version of Careerism scale.

Item 22, Leadership. In Items 22B-D and 22F, survey participants were asked to rate the degree to which they agreed with statements regarding their supervisors and other leaders (see Table 10). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Items 22B, 22D, and 22F were reverse coded. Higher scale scores denote higher perceptions of positive leadership among the leaders in one's work group and chain-of-command.

The Leadership scale is composed of four items (22B-D, 22F) from the Careerism scale, scored in the reverse direction. This scale was created as a measure of positive perceptions of leadership behavior. Alpha coefficients were .82 for the total sample, .82 for women, and .82 for men were (see Table 1). The inclusion of Item 22C lowered the alpha coefficients. For example, the alpha coefficient would be .86 for the total sample if Item 22C were removed. Recommendations for modifications to this scale include removing Item 22C from the scale.

Table 10.
Scale Items Measuring Leadership

<i>Leadership</i>	
22B ^a	The leaders in your work group are more interested in looking good than being good
22C	You would go for help with a personal problem to people in your chain-of-command
22D ^a	The leaders in your work group are not concerned with the way Service members treat each other as long as the job gets done

<i>Leadership</i>	
22F ^a	The leaders in your work group are more interested in furthering their careers than in the well-being of their Service members

^aReverse coded.

Items 24 and 26, Coworker and Work Satisfaction. In Items 24A-E and 26A-E, survey participants were asked to what extent they agreed with statements about their coworkers and the work they do (see Table 11). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score indicates more satisfying experiences with coworkers and work.

The Coworker Satisfaction scale consists of five items, 24A-E. Item 24F asks about coworkers but is not included in this scale. Three items (Items 24A, 24B, and 24E) were modified from the *1995 Form B* (Drasgow et al., 1999; Edwards, Elig, Edwards, & Riemer, 1997)¹¹ and were used subsequently on various DMDC surveys such as the *2002 WGR* (Ormerod et al., 2003) and the *2005 WEOA* (Ormerod et al., 2006). Item 24C was adapted from Spector's (1985) Job Satisfaction Survey (JSS)¹² and was used in the *2002 WGR*, the *2004 WGRR* (Ormerod et al., 2004), and the *2005 WEOA* surveys. Item 24D was first used in the *2002 WGR* and later used in the *2004 WGRR* and the *2005 WEOA*. New to the *2005 WEOA*, Item 24F was created by subject matter experts at DMDC and was included for purposes of testing.

The Work Satisfaction scale consists of five items (Items 26A-E) modified from the *1995 Form B*.¹³ Items 26B-E were included in the *1996 EOS* (Palmieri et al., 2001), Items 26A-D were included in the *2004 WGRR*, and Items 26A-E were reported in the *2002 WGR* and the *2005 WEOA*. Item 26F is new to the *2006 WGRA*. It was examined with Items 26A-E, but was found to perform poorly and is not included in this scale.

The Coworker and Work Satisfaction scales were piloted on a sample of military personnel and found to have strong reliability coefficients (Ormerod, Lee et al., 2001). The Coworker Satisfaction scale measures satisfaction with coworkers and the Work Satisfaction scale measures satisfaction with work.

Alpha coefficients for the Coworker Satisfaction scale (Items 24A-E) were .91 for the total sample, .91 for Women, and .90 for Men (see Table 1). The scale was examined with Item

¹¹ In Item 24A the response option originally reflected amount (from *very large extent* to *not at all*) and was reworded from a question ("Is there conflict among your co-workers?") to a statement. Item 24B was originally a statement ("The amount of effort of your co-workers compared to your effort") asking about satisfaction (from *very satisfied* to *very dissatisfied*).

¹² Item 24C was originally listed as "There is too much bickering and fighting at work," and response options ranged from *disagree very much* to *agree very much* in the JSS.

¹³ Modifications were made to the format of the item and item content. Items 26C and 26D were originally scored according to the member's degree of satisfaction along a 5-point scale ranging from *very satisfied* to *very dissatisfied* and had slight content differences in the *1995 Form B*. For example, Item 26C was originally listed as "The kind of work you do." Items 26A and 26B were originally scored according to the extent that the member agreed with the statements along a 5-point scale ranging from *not at all* to a *very large extent*. For example, Item 26A was originally listed as "Does your work provide you with a sense of pride?"

24F included but the item performed poorly. For example, the alpha coefficient for the total sample improved from .87 to .91 when 24F was removed from the scale.

Alpha coefficients for the Work Satisfaction scale (Items 26A-E) were .93 for the total sample, .93 for Women, and .93 for Men (see Table 1).

A one-factor CFA was fit to Coworker Satisfaction (Items 24A-E). Except for one fit index (i.e., RMSEA), the one-factor CFA fit well. For example, RMSEA = .09, NNFI = .98, SRMR = .02, GFI = .98, AGFI = .95, and CFI = .99 in the total sample (see Appendix A). Recommendations for modifications to this scale include removing Item 24F from the Coworker Satisfaction scale.

Two one-factor CFAs were also fit for Work Satisfaction (Items 26A-F). Because Item 26F was new, a one-factor CFA was fit with 26F and another one-factor CFA was fit without Item 26F. Both one-factor CFAs fit similarly well (except for RMSEA). For the one-factor CFA with Item 26F, fit indices for the total sample included: RMSEA = .08, NNFI = .99, SRMR = .02, GFI = .98, AGFI = .96, and CFI = .99. For the one-factor CFA without Item 26F, fit indices for the total sample included: RMSEA = .10, NNFI = .98, SRMR = .02, GFI = .98, AGFI = .95, and CFI = .99 (see Appendix A). Although these models fit similarly well, the content of Item 26F does not appear to reflect Work Satisfaction. Recommendations for modifications to this scale include removing Item 26F from the Work Satisfaction scale.

Table 11.
Scale Items Measuring Coworker and Work Satisfaction

<i>Coworker Satisfaction</i>	
24A	There is very little conflict among your co-workers.
24B	Your co-workers put in the effort required for their jobs.
24C	The people in your workgroup tend to get along.
24D	The people in your workgroup are willing to help each other.
24E	You are satisfied with the relationships you have with your coworkers.
24F ^{a b}	You put more effort into your job than your coworkers do.
<i>Work Satisfaction</i>	
26A	Your work provides you with a sense of pride.
26B	Your work makes good use of your skills.
26C	You like the kind of work you do.
26D	Your job gives you the chance to acquire valuable skills.
26E	You are satisfied with your job as a whole.
26F ^b	Your day-to-day work is directly tied to your wartime job.

^a Reverse Coded.

^b Omitted from final version of the scale.

Item 29, Unit Cohesion. In Items 29A-D, survey participants were asked to what extent they agreed or disagreed with statements regarding their unit cohesion (see Table 12). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score indicates a higher perception of unit cohesion.

The Unit Cohesion scale is composed of four items and assesses both affective (e.g., trust) and instrumental (e.g., teamwork) aspects of cohesion. Cohesiveness is a group property and can be viewed as a continuous rather than discrete variable, because cohesiveness varies between groups. Previous research has shown unit cohesion to be a predictor of unit performance in the military (Siebold & Lindsay, 1999).

Alpha coefficients for the Unit Cohesion scale (Items 29A-D) were .92 for the total sample, .92 for Women, and .91 for Men (see Table 1). There are no recommendations for modifications to this scale.

Table 12.
Scale Items Measuring Unit Cohesion

<i>Unit Cohesion</i>	
29A	Service members in your unit really care about each other
29B	Service members in your unit work well as a team
29C	Service members in your unit pull together to get the job done
29D	Service members in your unit trust each other

Scales in the Stress and Health Section

Item 30, Perceived Stress. In Items 30A-J, survey participants were asked how many times over the past month they had perceived stress in their lives (see Table 13). Response options ranged from 1 (*never*) to 5 (*very often*). Items 30D, 30E, 30G, and 30H were reverse coded so that a higher score indicates greater perceived distress.

Items 30A-J were tested in the *March 2003 Status of Forces Survey (March 2003 SOFR)* in response to a request from policy analysts concerned with military well-being. These items were first used in the *2004 WGRR* (Ormerod et al., 2004), and were subsequently used in the *2005 WEOA* (Ormerod et al., 2006). The Perceived Stress scale is composed of the 10-item version of the *Perceived Stress Scale* (PSS10; Cohen & Williamson, 1988).¹⁴ This scale assesses the extent to which stressful life events are experienced. The PSS10 is a measure of perceived stress that focuses on one's appraisal of an event as stressful rather than the event itself determining the level of stress. Previous research indicates the PSS10 is a good predictor of

¹⁴ Originally a 14-item scale, the PSS10 is a shortened version with response options that ranged from 0 (*never*) to 4 (*very often*). The 10-item version of the scale has been validated and appears to be as good a measure of perceived stress as the 14-item version (Cohen & Williamson, 1988).

health and other related outcomes, and it has found that the PSS10 has adequate internal reliability, with a coefficient alpha of .78 (Cohen & Williamson, 1988).

Alpha coefficients for the Perceived Stress scale (Items 30A-J) were .87 for the total sample, .88 for women, and .86 for men (see Table 1).

This scale was intended to be unidimensional and, thus, a one-factor CFA was fit to the data. Examining the fit indices suggested that the model was not fitting the data well, for example, RMSEA = .17, NNFI = .87, SRMR = .09, GFI = .83, AGFI = .73, and CFI = .90 in the total sample. Findings from the 2004 WGRS Scales and Measures report (Ormerod et al., 2005) suggested that the reverse-coded items formed a second method factor. Thus, a two-factor CFA was fit with the reverse-coded items assigned to a second (method) factor. The two-factor model resulted in a much better fit. For example, RMSEA = .10, NNFI = .95, SRMR = .05, GFI = .93, AGFI = .89, and CFI = .96 in the total sample (see Appendix A). Recommendations for modifications to this scale include replacing the reverse-scored items with items that are written in the positive direction, with the meanings of the items approximated as closely as possible. This was found to be a successful strategy for difficult scales in the past, such as the Job Diagnostic Survey (Idaszak & Drasgow, 1987).

Table 13.
Scale Items Measuring Perceived Stress

<i>Perceived Stress</i>	
30A	Been upset because of something that happened unexpectedly?
30B	Felt that you were unable to control the important things in your life?
30C	Felt nervous and stressed?
30D ^a	Felt confident about your ability to handle your personal problems?
30E ^a	Felt that things were going your way?
30F	Found that you could not cope with all of the things you had to do?
30G ^a	Been able to control irritations in your life?
30H ^a	Felt that you were on top of things?
30I	Been angered because of things that were outside of your control?
30J	Felt difficulties were piling up so high that you could not overcome them?

^a Reverse Coded.

Item 31, General Health. In Items 31A-D, survey participants were asked to rate their health in general (see Table 14). Response options ranged from 1 (*definitely false*) to 4 (*definitely true*). Items 31B and 31C were reverse coded so that a higher score indicates more positive perceptions of the member's general health.

The General Health scale is composed of four items from the general health perceptions subscale on the Short-Form Health Survey (SF-36) of the *Medical Outcomes Study*

questionnaire.¹⁵ The SF-36 is derived from work by the Rand Corporation and was designed to be used as a generic indicator of health status. It includes 36 items, drawn from the 245-item Medical Outcomes Study questionnaire, which assess eight health concepts (Ware & Sherbourne, 1992). First used in the *1995 Form B* (Drasgow et al., 1999), this scale is intended to assess members' perceptions of their general health.

Alpha coefficients for the General Health scale (Items 31A-D) were .79 for the total sample, .80 for women, and .78 for men (see Table 1). There are no recommendations for modifications to this scale.

Table 14.
Scale Items Measuring General Health

<i>General Health</i>	
31A	I am as healthy as anybody I know
31B ^a	I seem to get sick a little easier than other people
31C ^a	I expect my health to get worse
31D	My health is excellent

^a Reverse coded.

Scales in the Gender-Related Experiences in the Military Section

Items 33 and 34A, Sex Discrimination. In Items 33A-N, survey participants were asked to report whether in the past 12 months they had experienced adverse behaviors related to military performance evaluations, assignments, and careers (see Table 15). The intent of these items was to measure perceptions of discrimination. The response options asked whether gender contributed to their experiences. Response options included 1 (*no, or does not apply*), 2 (*yes, but your gender was NOT a factor*), and 3 (*yes, and your gender was a factor*) for Items 33A-M. Item 33N utilized two response options, 1 (*no*) and 2 (*yes*). Item 33L (“You did not get a military job assignment that you wanted and for which you were qualified”) is predicated on Item 33N (“...was that assignment legally open to women?”). Thus, these two items were combined to form Item 33LN to create a four-level response scale. Item 33M asks about any other adverse action (including a write-in option) and is utilized only when calculating incident rates for Sex Discrimination.

Item 34A asked whether the participant considered any of the behaviors marked as “Yes” on 33A-M to have been Sex Discrimination. Response options included 1 (*none*), 2 (*some*), 3 (*all*). Item 34A was used with Items 33A-LN to calculate the incident rate (described below) for Sex Discrimination. A higher score indicates a higher perception of discrimination.

¹⁵ The general health perceptions subscale on the SF-36 included a midpoint response option of *don't know*, and an additional question that asked the respondent to rate his or her health from *excellent* to *poor*.

DMDC and military subject matter experts developed a measure of perceived racial/ethnic discrimination in the workplace to assess discrimination along the facets of evaluation, assignment, and career. This measure was included in the *1996 EOS* (Palmieri et al., 2001). Based on results from *1996 EOS*, a gender version of the measure (i.e., Item 33) was developed for use in *2002 WGR* (Ormerod et al., 2003).

Sex Discrimination consists of 15 items (Items 33A-M, 33LN, and 34A) to measure three facets of discrimination: Evaluation Discrimination (Items 33A-D), Assignment Discrimination (Items 33E-G, LN), and Career Discrimination (Items 33H-K). Recoding took place in two stages. First, scores on Items 33A-K and 33M were recoded so that any score of a 3 (i.e., “yes, and gender was a factor”) was recoded to 1 and scores of 1 or 2 were recoded to 0 and scores on Item 33LN were recoded so that any score of a 4 were recoded as 1 and scores of 1, 2, or 3 were recoded to 0. Next the incident rate was calculated based on the algorithm described below.

To report an incident rate for Sex Discrimination, the counting algorithm utilized the following process:

1. Respondent indicates experiencing any of 13 discrimination behaviors and perceives that gender was a factor (Items 33A-LN) at least once in past 12 months (a score of 1 or more), and
2. Respondent indicates at least some of the behaviors experienced were sex discrimination (a score of 2 or 3 on Item 34A).

Respondents meeting these criteria were assigned a score of 2 (experienced sexual discrimination); whereas respondents who did not were assigned a score of 1 (did not experience sexual discrimination).

These rates are reported as percentages, computed by dividing the number of respondents who match the criteria for the measure (e.g., indicated that a behavior occurred and gender was a factor and some or all of it was sex discrimination) by the total number of respondents who completed surveys. A similar method of counting discrimination incidents, but without Item 34A, can be utilized with the three facets of discrimination: Evaluation Discrimination (Items 33A-D), Assignment Discrimination (Items 33E-G, LN), and Career Discrimination (Items 33H-K). For each facet, the respondent indicates experiencing any of the behaviors (e.g., Items 33A-D) at least once in the past 12 months.

The alpha coefficients for Sex Discrimination (Items 33A-K, LN) were .81 for the total sample, .82 for women, and .80 for men. The alpha coefficients for the Evaluation Discrimination scale (Items 33A-D) were .61 for the total sample, .66 for women, and .57 for men. For Assignment Discrimination (Items 33E-G, LN), alpha coefficients were .65 for the total sample, .66 for women, and .64 for men. For Career Discrimination (Items 33H-K), the alpha coefficients were .69 for the total sample, .71 for women, and .67 for men.

A three-factor confirmatory model for Sex Discrimination was tested using tetrachoric correlations (for dichotomous responses) and diagonally weighted least squares estimation. The three factors were as follows: Evaluation Discrimination (Items 33A-D), Assignment Discrimination (Items 33E-G, 33LN), and Career Discrimination (Items 33H-K). The model fit

well. For example, RMSEA = .01 and SRMR = .04 in the total sample (see Appendix A). However, the factor intercorrelations were high, ranging from .83 to .91 (e.g., correlation between Assignment and Career Discrimination factors was .91), which suggests a one-factor solution as the most parsimonious. Compared to the three-factor model, a one-factor model fit the data nearly as well (e.g., RMSEA = .02 and SRMR = .05 in the total sample). Given the high intercorrelations among the subscales, the results suggested that Items 33A-LN be considered unidimensional. Alpha coefficients and confirmatory factor models were conducted using the items' original three-point response scoring with the exception of Item 33LN, which used the four-point response scoring described above. There are no recommendations for modifications to this scale.

Table 15.
Scale Items Measuring Sex Discrimination

<i>Discrimination</i>	
33A	You were rated lower than you deserved on your last military evaluation
33B	Your last evaluation contained unjustified negative comments
33C	You were held to a higher performance standard than others
33D	You did not get an award or decoration given to others in similar circumstances
33E	Your current assignment has not made use of your job skills
33F	Your current assignment is not good for your career if you continue in the military
33G	You did not receive day-to-day, short-term tasks that would have helped you prepare for advancement
33H	You did not have a professional relationship with someone who advised (mentored) you on career development or advancement
33I	You did not learn <u>until it was too late</u> of opportunities that would have helped your career
33J	You were unable to get straight answers about your promotion possibilities
33K	You were excluded from social events important to career development and being kept informed
33L	You did not get a job assignment that you wanted and for which you were qualified
33N	If you answered “Yes, and your gender was a factor” to “I” above, was this assignment legally open to women?
33M	Have you had any other adverse personnel actions in the past 12 months? (If yes, please specify)

Items 35 and 36, Unwanted, Gender-Related Behaviors Scales. In Items 35A-T, survey participants were asked to indicate how frequently they experienced unwanted, gender-related

behavior in the previous 12 months (see Table 16). Items 35A-S asked about specific behaviors and Item 35T, which includes an option for write-in responses, asks about “Other unwanted gender-related behavior.” Item 35T is not included in scales or analyses. For each of the behavioral items, respondents were asked about “unwanted” and “uninvited” experiences involving military personnel or civilian employees or contractors. Response options ranged from 1 (*never*) to 5 (*very often*). A higher score denotes more frequent experiences of unwanted gender-related behavior.

The 19 items included in 35A-S represent a broad spectrum of unwanted, gender-related behaviors tapped by five subscales (Sexist Behavior, Crude/Offensive Behavior, Unwanted Sexual Attention, Sexual Coercion, and Sexual Assault). Sexist Behavior (Items 35B, D, G, I) includes verbal/nonverbal behaviors that convey insulting, offensive, and condescending attitudes based on the respondent’s sex. Crude/Offensive Behavior (Items 35A, C, E, F) includes verbal/nonverbal behaviors of a sexual nature that are offensive or embarrassing. Unwanted Sexual Attention (Items 35H, J, M, N and Q) includes attempts to establish a sexual relationship, touching, or fondling. Sexual Coercion (Items 35K, L, O, and P) reflects instances of job benefits or job losses conditioned on sexual cooperation (i.e., classic *quid pro quo*). Sexual Assault (Items 35R, S) asks about attempted and/or actual sexual relations without the member’s consent and against his/her will.

In Item 36, survey participants were asked whether they considered any of the behaviors they endorsed in Item 35 to have been sexual harassment. Response options included 1 (*none were sexual harassment*), 2 (*some were sexual harassment; some were not sexual harassment*), 3 (*all were sexual harassment*), and 4 (*does not apply – I marked “Never” to every item in Question 35*). Individuals who selected this last option were directed to skip forward in the survey. Item 36 was used with Item 35 to calculate the incident rate for sexual harassment (described below).

The DoD Sexual Harassment Core Measure includes the Crude/Offensive Behavior, Unwanted Sexual Attention, and Sexual Coercion subscales (Items 35A, C, E, F, H, J, K, L, M, N, O, P, Q), plus Item 36. When measured without Item 36, the 13 core items are referred to as “Behaviors Indicative of Sexual Harassment.”¹⁶ The items, grouped according to subscale, appear in Table 14.

To compute incidence rates for Sexist Behavior, Crude/Offensive Behavior, Unwanted Sexual Attention, Sexual Coercion, Sexual Assault, and Behaviors Indicative of Sexual Harassment a simple one-step counting process is utilized: That is, did the individual experience at least one behavior in the category at least once (response options range from *once or twice* to *very often*) in the previous 12 months?

To compute an incidence rate for the “DoD Sexual Harassment Core Measure,” a two-step counting algorithm is employed. This counting algorithm requires that the respondent:

¹⁶ Survey measurement of sexual harassment is defined by the U.S. Department of Defense as the presence of behaviors indicative of sexual harassment (Crude/Offensive Behavior, Sexual Coercion, and Unwanted Sexual Attention; Sexist Behavior and Sexual Assault are not counted in the DoD survey measure of sexual harassment) and the labeling of those behaviors as sexual harassment (Survey Method for Counting Incidents of Sexual Harassment, 2002).

1. Indicates experiencing one or more of the 13 sexual harassment behaviors (Items 35A, C, E, F, H, J, K, L, M, N, O, P, Q) at least once in the previous 12 months, and
2. Indicates that at least some of the behaviors experienced were sexual harassment (a score of 2 or 3 on Item 36).

These rates are reported as percentages, computed by dividing the number of respondents who match the criteria for the measure (e.g., indicated that a behavior occurred at least once) by the total number of respondents who completed surveys. To be counted as a complete survey the respondent must have provided (1) at least one response (*never, once or twice, sometimes, often, very often*) in Item 35 and (2) answered at least 50% of non-skippable items on the survey.

The majority of Item 35 (35A-M, O-P, R, and S) is based on the *Sexual Experiences Questionnaire*¹⁷ (SEQ; Fitzgerald, et al., 1988; Fitzgerald, Gelfand, & Drasgow, 1995); 35N and 35Q were developed by DMDC and piloted in this study as possible replacement items. The SEQ is a widely used instrument containing multiple items assessing participants' experiences of sexual harassment and other unwanted, gender-related behavior. It has excellent psychometric properties (Fitzgerald et al., 1995; Gelfand, Fitzgerald, & Drasgow, 1995) and was identified as the best paper-and-pencil instrument available for assessing sexual harassment experiences (Arvey & Cavanaugh, 1995). The SEQ was modified to be applicable to a military setting (Fitzgerald, Magley, Drasgow, & Waldo, 1999) for *1995 Form B*.

The 1995 measure included 25 items¹⁸ and was shortened to 19 items in 2002. Three four-item subscales (Crude/Offensive Behavior, Unwanted Sexual Attention, and Sexual Coercion) were developed by subjecting items to item response theory analysis (Stark, Chernyshenko, Lancaster, Drasgow, & Fitzgerald, 2002). The Sexist Behavior subscale, also four items, contains three items from *1995 Form B* (Drasgow et al., 1999) and one item that was new to the *2002 WGR* (Item 35B; Ormerod et al., 2003).¹⁹ Finally, the Unwanted Sexual Attention subscale, previously consisting of four items, currently contains five items, two of which are new to the *2006 WGRA*. The new items are Items 35N and Q, which were designed to replace Item 55N in the *2002 WGR*.²⁰

Because Items 35N and 35Q are new to the measure, the rational and psychometric grouping of Items 35A-S was subjected to in-depth examination. First, reliability analyses were first conducted, with Items 35N and 35Q assigned to the Unwanted Sexual Attention subscale. Resulting coefficients for this subscale were .89 for the total sample, males, and females, indicating excellent reliability. Coefficients for all of the subscales ranged from .76 to .97 (see Table 1). CFAs of Items 35A-Q were then conducted, utilizing tetrachoric correlations (with

¹⁷ The civilian version of the SEQ uses somewhat different labels and combinations of the subscales based on factor analysis of civilian data (Gelfand, Fitzgerald, & Drasgow, 1995). It refers to participants' experiences in three general categories: gender harassment (gender harassment includes those behaviors referred to as Sexist Behavior and Crude/Offensive Behavior in the military), unwanted sexual attention (which includes sexual assault in civilian contexts), and sexual coercion (Gelfand et al., 1995).

¹⁸ Originally 26 items, an item was deleted from *1995 Form B* because it did not fit with the theoretical framework and yielded very little variance.

¹⁹ Other changes from *1995 Form B* to *2002 WGR* include four instances of changing the word "sex" to "gender," changing the word "which" to "that," and changing the word "unsuccessful" to "not successful."

²⁰ Item 55N, originally based on the SEQ, read, "Made unwanted attempts to stroke, fondle, or kiss you?"

dichotomized responses) and diagonally weighted least squares estimation. A four-factor structure was to the data (i.e., Sexist Behavior, Crude/Offensive Behavior, Unwanted Sexual Attention, and Sexual Coercion), with Item 35B crossloading onto Sexist Behavior and onto Crude/Offensive Behavior. This model fit the data well (17 items).²¹ For example, RMSEA = .02 and SRMR = .04 in the total sample (see A).

An additional four-factor CFA was carried out based on a content analysis of Item 35Q, which was allowed to load onto both Crude/Offensive Behavior and Unwanted Sexual Attention. This model did not yield an appreciably better fit than the four-factor model allowing only Item 35B to crossload. Moreover, Item 35Q loaded more highly onto Unwanted Sexual Attention than onto Crude/Offensive Behavior. Based on these results, the first CFA model, with only Item 35B crossloading onto two factors, was preferred.

Two final analyses were conducted to test the fit of the two new SEQ items. First, complete-linkage cluster analyses were conducted, separately for male and female respondents. The results for the women mirrored those yielded by the CFAs, with Items 35N and Q clustering with the Unwanted Sexual Attention scale. Results for the men were unclear, which largely reflects the lower item base rates for the male sample.

Second, a non-metric Multidimensional Scaling (MDS) was conducted to aid in the interpretation of the cluster analyses results. For the female sample, a two-dimensional plot of the coordinates revealed Item 35Q to fall almost equidistant between the Unwanted Sexual Attention and Crude/Offensive Behavior clusters. Once again, the MDS solution did not yield an interpretable solution for the men.

Given conceptual and psychometric problems with Item 35Q, a four-factor CFA was carried out without Item 35Q allowing Item 35B to crossload onto the Sexist Behavior and Crude/Offensive Behavior factors. This model fit as well as the CFA model that included Item 35Q and allowed Item 35B to crossload. For example, RMSEA = .02 and SRMR = .04 in the total sample (see A). Overall, the analyses give rise to several recommendations for Item 35A-S.

First, Items 35A, N, and Q would benefit from slight wording changes:

(1) The word “repeatedly” should be removed from Item 35A because it denotes a frequency of events already built into the response scale.²²

(2) Item 35N in its current form attributes motivation to the offender and should be replaced; if left retained, the terms “intentionally” and “in a sexual way” should be removed.

²¹ Item 35B was allowed to load on both the Sexist Behavior and the Crude/Offensive Behavior subscales because a large modification index indicated that there would be marked improvement in fit if it were allowed to do so and this “crossloading” can be argued to be theoretically justifiable.

²² The original SEQ from which this item was taken (Fitzgerald, et al., 1988) originally employed a dichotomous “yes/no” format; the word frequency was written into the item at that time to indicate that it was designed to tap behavior that was frequent or ongoing, rather than a one-time or passing minor incident. With the shift to a continuous Likert-type response scale, this is not only unnecessary but possibly confusing (e.g., how does an individual experience something repeatedly “once or twice”?)

(3) Item 35Q is problematic, as it may represent either Unwanted Sexual Attention or Crude/Offensive Behavior, depending on the nature of the situation the respondent experienced; this ambiguity is reflected in the fact that it cross-loads on both of these factors. In the interests of maximizing simple structure, this item should be removed or revised.

(4) In the future, when developing or testing possible “replacement” items, such as Items 35N and 35Q, it is important to include the original item (in this case, Item 55N from the *WGRR 2004*) so that the psychometric properties of the intended replacement (i.e., can be empirically compared to the original item. This is standard practice in the standardized testing industry as well as in DoD’s Armed Services Vocational Aptitude Battery (ASVAB).

Items 37-76 are designed to provide an in-depth examination of the “one situation that had the greatest effect” on the respondent. They provide the opportunity to indicate the behavioral events that constituted that situation, where it occurred, and who was involved. Respondents are also asked how the situation affected them, how they coped with it, whether they experienced retaliation, how satisfied they were with the handling of the situation, and a series of questions about the reporting process.

Table 16.
Scale Items Measuring Unwanted, Gender-Related Behaviors

<i>Sexist Behavior</i>	
35B	Referred to people of your gender in insulting or offensive terms?
35D	Treated you “differently” because of your gender (for example, mistreated, slighted, or ignored you)?
35G	Made offensive sexist remarks (for example, suggesting that people of your gender are not suited for the kind of work you do)?
35I	Put you down or was condescending to you because of your gender?
<i>Crude/Offensive Behavior</i>	
35A	Repeatedly told sexual stories or jokes that were offensive to you?
35C	Made unwelcome attempts to draw you into a discussion of sexual matters (for example, attempted to discuss or comment on your sex life)?
35E	Made offensive remarks about your appearance, body, or sexual activities?
35F	Made gestures or used body language of a sexual nature that embarrassed or offended you?
<i>Unwanted Sexual Attention</i>	
35H	Made unwanted attempts to establish a romantic sexual relationship with you despite your efforts to discourage it?
35J	Continued to ask you for dates, drinks, dinner, etc., even though you said “No?”
35M	Touched you in a way that made you feel uncomfortable?
35N	Intentionally cornered you or leaned over you in a sexual way?
35Q	Made sexually suggestive comments, gestures, or looks (e.g., stared at your

<i>Sexist Behavior</i>	
	body)?
<i>Sexual Coercion</i>	
35K	Made you feel like you were being bribed with some sort of reward or special treatment to engage in sexual behavior?
35L	Made you feel threatened with some sort of retaliation for not being sexually cooperative (for example, by mentioning an upcoming review)?
35O	Treated you badly for refusing to have sex?
35P	Implied faster promotions or better treatment if you were sexually cooperative?
<i>Sexual Assault</i>	
35R	Attempted to have sex with you without your consent or against your will, but was not successful?
35S	Had sex with you without your consent or against your will?
<i>Other Unwanted Behavior</i>	
35T	Other unwanted gender-related behavior? (unless you mark “never,” please describe below.)

Item 37, Behaviors in the One Situation Involving Sexual Harassment. In Items 37A-E, survey participants were presented with four of the subscales described in Items 35A-Q (Sexist Behavior, Crude/Offensive Behavior, Unwanted Sexual Attention, Sexual Coercion) that included examples of behaviors from each subscale. For example, Sexist Behavior included the example “mistreated you because of your gender.” In addition, an item (37E) asked whether respondents had “other” experiences and included a write-in option. Respondents were asked to “Think about the situation(s) you experienced during the past 12 months that involved the behaviors you marked in Question 35A-Q” and pick the situation “that had the greatest effect on you.” Respondents indicated the category that best described the behavior that occurred during this situation (see Table 17). Response options were 1 (*no*) and 2 (*yes*). These response options were recoded to 0 (*no*) and 1 (*yes*) for easier computation of incident rates. A higher score denotes more unwanted, gender-related behaviors in the situation with the greatest effect.

Items 37A-E are presented in a manner similar to that of the items in the One Situation on the 2002 WGR (Ormerod et al., 2003) and the 2004 WGR (Ormerod et al., 2004). However, whereas the items in the 2002 WGR and the 2004 WGR paralleled those in the SEQ and assessed the number and type of behaviors experienced in the One Situation with the greatest effect, the items in the 2006 WGRA are grouped according to subscale and the respondent is asked to choose a category that describes a behavior. The Behaviors in the One Situation items are presented as a checklist for types of harassment, thus only incidence rates were reported for Items 37A-E.

Incidence rates for Items 37A-E can be seen in Table 16. To report rates for each item separately, the counting process provided three categories of responses to each item: (1) individuals who indicated experiencing the type of behavior in the item (i.e., labeled “Yes” in

Table 3), (2) individuals who indicated they did not experience the type of behavior in the item (i.e., labeled “No” in Table 3), and (3) individuals who did not reply to the item (i.e., labeled “No response” in Table 3). For the rate based on the total set of behaviors (Items 37A-E), only one response category was provided—individuals who indicated experiencing at least one of the behaviors represented by Items 37A-E (i.e., responded *yes* to at least one of the items).

These rates are reported as percentages, computed by dividing the number of respondents who match the criteria for the appropriate item or set of items by the total number of eligible respondents who provided at least one response (“*yes*,” “*no*,” “*don’t know*”) to one or more of the behaviors in the One Situation items. A small body of research supports the validity and usefulness of the One Situation scale as a full set of items to parallel the SEQ (e.g., see Mazzeo, Bergman, Buchanan, Drasgow, & Fitzgerald, 2001). Thus, recommendations for this scale include presenting the full set of items paralleling the Unwanted, Gender-Related Behaviors, rather than the subscale descriptions.

Table 17.
Scale Items Measuring Behaviors in the One Situation Involving Sexual Harassment

<i>Sexist Behavior</i>	
37A	Sexist Behavior (e.g. mistreated you because of your gender or exposed you to language/behaviors that conveyed offensive or condescending gender-based attitudes).
<i>Crude/Offensive Behavior</i>	
37B	Crude/Offensive Behavior (e.g., exposed you to language/behaviors/jokes of a sexual nature that were offensive or embarrassing to you).
<i>Unwanted Sexual Attention</i>	
37C	Unwanted Sexual Attention (e.g., someone attempted to establish a sexual/romantic relationship with you, even though you objected).
<i>Sexual Coercion</i>	
37D	Sexual Coercion (e.g., someone implied preferential treatment in exchange for your sexual cooperation).
<i>Other Unwanted Behavior</i>	
37E	Other? (Please specify).

Item 38, Subjective Distress. In Items 38A-F, survey participants were asked to indicate the degree to which the One Situation (i.e., behaviors endorsed in Item 37) was distressing (see Table 18). Response options ranged from 1 (*not at all*) to 5 (*very large extent*). A higher score denotes greater distress.

Items 38A-C were part of the Subjective Distress scale in the *1995 Form B* (Drasgow et al., 1999) and the *2002 WGR* (Ormerod et al., 2003). Items 38D-E are new to the *2006 WGRA*.

Items 38A-C and 38F can be found in the Feelings Scale (Swan, 1997).²³ Originally a 15-item scale, the FS was adapted from an emotions scale by Folkman and Lazarus (1985) and measures the extent individuals assess sexually harassing behaviors as stressful. The Subjective Distress scale can be rationally divided into two subscales, Subjective Distress I (Items 38A, 38C, 38D-E), which is intended to tap offensive aspects of distress, and Subjective Distress II (Items 38B and 38F), which represents a threatening facet of distress.

The alpha reliability coefficients in the full sample were .90 for Items 38A-F, .89 for Subjective Distress I and .86 for Subjective Distress II (see Table 1). A two-factor CFA, conforming to Subjective Distress I and II, using maximum likelihood estimation was fitted to the data but the fit was not optimal, for example, RMSEA = .22, NNFI = .88, SRMR = .07, GFI = .89, AGFI = .70, and CFI = .94 in the total sample. Examination of the modification index for Lambda X indicated that Item 38E might crossload on the Subjective Distress II factor (i.e., the modification index for Item 38E was 2686.27). A two-factor CFA, conforming to Subjective Distress I and II, but with 38E crossloading onto both factors produced an improved fit to the data. For example, RMSEA = .12, NNFI = .96, SRMR = .03, GFI = .97, AGFI = .90, and CFI = .98 in the total sample (see Appendix A). Recommendations for modifications to this scale include replacing Item 38E.

Table 18.
Scale Items Measuring Subjective Distress

<i>Subjective Distress</i>	
38A	Annoying?
38B	Threatening?
38C	Offensive?
38D	Distracting?
38E	Stressful?
38F	Intimidating?

Item 48, Reporting. In Items 48A-D, survey participants were asked to indicate whether and to whom the respondent reported the One Situation and the impact of reporting (see Table 19). For each of the four items, response options ranged from 1 (no, I did not report it to this person/office) to 5 (yes, and it made things better). Thus, respondents were able to endorse reporting to multiple individuals or offices. A higher item score indicates that the respondent indicated reporting the One Situation to the queried individual or group.

Items 48A-D were originally part of a 10-item scale introduced in the *1995 Form B* and are similar to those reported in the *2002 WGR* (Ormerod et al., 2003).²⁴ The original reporting

²³ Items 38A-C and 38F were originally expressed in the past tense (e.g. Item 38A is listed as “Annoyed” in the FS).

²⁴ Items 48A-D are modified versions of items used in the *1995 Form B* and the *2002 WGR*. Items contain modification to content. For example, Item 48A combines two items, “My immediate supervisor” and “Someone

scale was shortened to the current four items to reduce the burden on survey respondents and to minimize small cell sizes. The items were created by subject matter experts to capture the different avenues through which experiences would be reported. Items 48A-D measure behaviors that may be implemented by an individual and, as such, are not necessarily intended as a scale measuring a theoretical construct. There are no recommendations for modifications to these items.

Table 19.
Scale Items Measuring Reporting

<i>Reporting</i>	
48A	Someone in your chain-of-command
48B	Someone in the chain-of-command of the person(s) who did it
48C	Special military office responsible for handling these kinds of complaints (e.g., Military Equal Opportunity or Civil Rights Office)
48D	Other person or office with responsibility for follow-up

Items 52 and 53, Satisfaction with Reporting and Outcome after Sexual Harassment.
In Items 53A-E, participants were asked to indicate how satisfied they were with the reporting process (see Table 20). Response options ranged from 1 (*very dissatisfied*) to 5 (*very satisfied*). A higher score indicates a greater degree of satisfaction with the reporting process.

Items 53A-E were first utilized in the *1995 Form B* (Drasgow et al., 1999).²⁵ Items 53A-D can also be found in the *2002 WGR* (Ormerod et al., 2003). In Item 52, participants were asked to indicate how satisfied they were with the outcome of their complaint (see Table 20). Response options ranged from 1 (*very dissatisfied*) to 5 (*very satisfied*). Item 52 can be found on the *1995 Form B*²⁶ and the *2002 WGR*. When combined, Items 53A-E and Item 52 form the Satisfaction with Reporting and Outcome scale, which is intended to measure satisfaction with the reporting process and with the outcome of the complaint.

Alpha coefficients were .92 for the total sample, .92 for women, and .93 for men (see Table 1). There are no recommendations for modifications to this scale.

else in your chain-of-command (including your commanding officer).” Scoring options in the *1995 Form B* used four response options assessing whether the behavior was reported and whether it made things better or worse, whereas scoring in the *2002 WGR* ranged from 0 (*no*) to 1 (*yes*).

²⁵ Items 53A-E are slightly modified versions of items found on the *1995 Form B*. Slight modifications were made to item content, and the stem was modified.

²⁶ Item 52 was in the present tense on the *1995 Form B*.

Table 20.
Scale Items Measuring Satisfaction with Reporting and Outcome after Sexual Harassment

<i>Satisfaction with Reporting and Satisfaction with Reporting and Outcome after Sexual Harassment</i>	
53A	Availability of information about how to file a complaint
53B	Treatment by personnel handling your complaint
53C	Amount of time it took/is taking to resolve your complaint
53D	How well you were/are kept informed about the progress of your complaint
53E	The complaint process overall
52	How satisfied were/are you with the outcome of your complaint?

Items 54, Sexual Harassment Retaliation. In Items 54A-B survey participants were asked to indicate whether or not they experienced retaliatory behaviors as a result of reporting the One Situation (see Table 21). Response options were 1 (*yes*), 2 (*no*), and 3 (*don't know*). To calculate frequencies, response options, 2 (*yes*), 1 (*no*), and 99 (*don't know*), were recoded to 1 (*no*), 2 (*don't know*), and 3 (*yes*), based on research indicating that the *don't know* option acts as a midpoint (Drasgow et al., 1999). A higher score denotes greater amounts of retaliation.

Items 54A-B were shortened from the 11 items used in the 2002 WGR (Ormerod et al., 2003) to reduce the burden on survey respondents. The 11-item retaliation scale was originally adapted from the U.S. Merit Systems Protection Board surveys of sexual harassment in the federal workplace (USMSPB, 1981, 1987; Near & Miceli, 1986) and research by Parmerlee, Near, and Jensen (1982). Retaliation related to workplace harassment includes two types: personal (e.g., isolating and targeting victims of harassment with hostile interpersonal behaviors) and professional (e.g., behaviors that interfere with career advancement and retention) reprisals that may contribute differentially to outcomes (Cortina & Magley, 2003). The current items ask whether respondents experienced professional (Item 54A) or social (i.e., personal) retaliation (Item 54B) and provide descriptions of each type. Items 54A-B describe the subscales of retaliation and are presented as a checklist. Thus, only incidence rates were reported.

To report incident rates for Items 54A-B, the counting process provided four categories of responses to each item: (1) individuals who indicated experiencing the type of retaliation (i.e., labeled “Yes” in Table 3), (2) individuals who indicated they did not experience the type of retaliation (i.e., labeled “No” in Table 3), (3) individuals who indicated they did not know whether they experienced the type of retaliation (i.e., labeled “Don’t know” in Table 3), and (4) individuals who did not reply to the item (i.e., labeled “No response” in Table 3). For the incident rate based on the total set of behaviors, only one response category was provided: individuals who indicated experiencing at least one of the behaviors represented by Items 54A-B (i.e., responded *yes* to at least one of the two items).

Rates are reported as percentages, computed by dividing the number of respondents who match the criteria for the appropriate item or pair of items by the total number of eligible respondents who provided at least one response (*yes*, *no*) to Item 54A and/or Item 54B.

Items 54A-B provide estimates of whether respondents' perceived experiencing each type of retaliation as a result of reporting the One Situation. Recommendations include providing the full set of retaliation items if space on the survey permits.

Table 21.
Scale Items Measuring Retaliation

<i>Retaliation</i>	
54A	Professional Retaliation (e.g., loss of privileges, denied promotion/training, transferred to less favorable job)?
54B	Social retaliation (e.g., ignored by coworkers, being blamed for the situation)?

Item 55, Reasons for Not Reporting Sexual Harassment. In Items 55A-K, survey participants were asked to indicate their reasons for not reporting the behaviors that were endorsed in the One Situation (see Table 22). For each of the eleven items, response options ranged from 1 (*no*) to 2 (*yes*). Thus, respondents were able to endorse multiple reasons for not reporting. A higher item score indicates that the respondent endorsed the item as a reason for not reporting.

Items similar to Items 55A-G and 55I-K can be found on the *1995 Form B* and all were included in the *2002 WGR* (Ormerod et al., 2003) survey. Both surveys included longer lists of reasons, which were shortened to Items 55A-K to eliminate similar or redundant items and reduce the burden on respondents. Modifications were made to item content and the presentation was changed from a checklist in the *1995 Form B* to the current dichotomous scale.²⁷ Items 55A-B and 55D-J were developed by DMDC researchers and subject matter experts through an iterative process that included feedback from focus groups. Item 55C was developed for the *2002 WGR* following group and individual structured interviews with service members (Ormerod et al., 2003). Items 55A-J were intended to function as a scale that taps several broad classes of reasons for not reporting the behaviors endorsed in the One Situation. However, examination of the factor structure on the *2002 WGR* was inconclusive and these items appear to function more like a behavioral list than a scale. Thus, reliability coefficients are not provided in Table 1. There are no recommendations for modifications to these items.

²⁷ For example in the *1995 Form B*, Item 55H was originally two items that asked separately about the “person(s) who did it” and their “friends/associates,” and Item 55I originally read, “I thought my performance evaluation or chances for promotion would suffer.”

Table 22.
Scale Items Measuring Reasons for Not Reporting Sexual Harassment

<i>Reasons for Not Reporting Sexual Harassment</i>	
55A	You thought it was not important enough to report
55B	You did not know how to report
55C	You felt uncomfortable making a report
55D	You took care of the problem yourself
55E	You did not think anything would be done
55F	You thought you would not be believed
55G	You thought reporting would take too much time and effort
55H	You were afraid of retaliation/reprisals from the person(s) who did it or from their friends
55I	You were afraid of negative professional outcomes
55J	You thought you would be labeled a troublemaker
55K	Other (Please specify)

Items 56 and 57, Single-Item Measure of Unwanted Sexual Contact and the One Situation Involving Unwanted Sexual Contact. In Item 56, which is referred to as the single-item measure of unwanted sexual contact, survey participants were asked to indicate whether, in the past year, they had experienced any of five types of sexual contact that were against their will or occurred when they did not consent. Response options were 1 (*yes, once*), 2 (*yes, multiple times*), and 3 (*no*). Item 56 was recoded so that the two “yes” options were combined; the recoded options were 0 (*no*) and 1(*yes, once or multiple times*). A higher item score reflects that unwanted sexual contact occurred.

In Items 57A-E, survey participants were asked to think about the situation(s) that they experienced in the past year that involved the behaviors in Item 56 and describe the event that had the greatest effect (see Table 23). Response options ranged from 1 (*did not do this*) to 2 (*did this*). Higher item scores reflect that the behavior was part of the One Situation for Unwanted Sexual Contact.

These items are new to the 2006 WGRA survey and were originally developed for the SAGR2006 (Lipari et al., 2006) to reflect to a range of activities consistent with those that the UCMJ prohibits, including uninvited and unwelcome completed or attempted sexual intercourse, sodomy (oral or anal sex), penetration by an object, and the unwanted touching of genitalia and other sexually related areas of the body. The questions are predicated on whether the experiences occurred when the respondent did not or could not consent (e.g., too intoxicated). The items were developed through an iterative process that included consultation with researchers at the University of Illinois, examination of sexual assault surveys used with civilian populations, and focus group research with Academy students.

To report incident rates for the One Situation Involving Unwanted Sexual Contact (i.e., Items 57A-E), the counting process provided three categories of responses for each item: (1)

individuals who indicated experiencing the type of behavior in the item (i.e., labeled “Yes” in Table 3), (2) individuals who indicated they did not experience the type of behavior in the item (i.e., labeled “No” in Table 3), and (3) individuals who did not reply to the item (i.e., labeled “No response” in Table 3). For the rate based on the total set of behaviors (Items 57A-E), only one response category was provided: individuals who indicated experiencing at least one of the behaviors represented by Items 57A-E (i.e., responded *yes* to at least one of the items).

These rates are reported as percentages, computed by dividing the number of respondents who match the criteria for the appropriate item or set of items by the total number of eligible respondents who reported experienced Unwanted Sexual Contact (*yes, once* and *yes, multiple times*) in Item 56.

The unwanted sexual contact items provide information about reporting frequencies of unwanted sexual contact. There are no recommendations for modifications to these items.

Table 23.
Scale Items Measuring Behaviors in the One Situation Involving Unwanted Sexual Contact

<i>Unwanted Sexual Contact</i>	
57A	Sexually touched you (e.g., intentional touching of genitalia, breast, or buttocks) or made you sexually touch them
57B	Attempted to make you have sexual intercourse, but was not successful
57C	Made you have sexual intercourse
57D	Attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful
57E	Made you perform or received oral sex, anal sex, or penetration by a finger or object

Item 76, Reasons for Not Reporting Sexual Assault. In Items 76A-L, survey participants were asked to indicate their reasons for not reporting the behaviors that were endorsed in the One Situation (see Table 24). Response options ranged from 1 (*no*) to 2 (*yes*). A higher item score indicates that the respondent endorsed the item as a reason for not reporting. Items 76A-I and 76L were utilized in the 2002 *WGR* (Ormerod et al., 2003) and the 2004 *WGRR* (Ormerod et al., 2004) with slight modification to several items to distinguish between military and civilian contexts and to shorten the scale. Items similar to Items 76A-B, 76D-E, 76F-I, and 76L were utilized in the 1995 *Form B*. Modifications were made to content and the presentation was changed from that of a checklist to the current dichotomous scale in the 2004 *WGRR*.²⁸ Items 76A-B, 76D-I, and 76L were developed by DMDC researchers and subject matter experts using feedback from focus groups and are conceptually similar to items used in the 1996 *EOS*.

²⁸ Items 76A-B, 76D-E, and 76F-I are slightly modified versions of items used in the 1995 *Form B*. For example in the 1995 *Form B*, Item 76A was originally listed as “I did not think it was that important;” Items 76G stemmed from one item that stated “I was too afraid;” and Item 76B originally stated “I did not know what to do.”

Item 76C was developed for the 2002 WGR following structured group and individual interviews with Service members. Two new items (Items 76J-K) were included in the 2006 WGRA to tap a respondent's sense of shame and fear of punishment. Items 76A-L are intended to function as a scale and measure several reasons for not reporting unwanted sexual contact. However, examination of the factor structure in the 2006 WGR was inconclusive and these items appear to function more like a behavioral list than a scale. Thus reliability coefficients are not provided in Table 1. There are no recommendations for modifications to this scale.

Table 24.
Scale Items Measuring Reasons for Not Reporting Sexual Assault

<i>Non-reporting</i>	
76A	You thought it was not important enough to report
76B	You did not know how to report
76C	You felt uncomfortable making a report
76D	You did not think anything would be done
76E	You thought you would not be believed
76F	You thought reporting would take too much time and effort
76G	You were afraid of retaliation/reprisals from the person(s) who did it or from their friends
76H	You thought your performance evaluation or chance for promotion would suffer
76I	You thought you would be labeled a troublemaker
76J	You did not want anyone to know
76K	You feared you or others would be punished for infractions/violations, such as underage drinking or fraternization
76L	Other (Please specify)

Scales in the Personnel Policy, Practices, and Training Section

Item 77, Leadership Efforts to Stop Sexual Harassment. In Items 77A-C, survey participants were asked to indicate whether senior leadership “made honest and reasonable efforts to stop sexual harassment” (see Table 25). To calculate alpha coefficients, means, standard deviations, and standard errors, response options, 1 (*no*), 2 (*yes*), and 99 (*don’t know*), were recoded to 1 (*no*), 2 (*don’t know*), and 3 (*yes*), based on research indicating that a “don’t know” option tends to act as a midpoint (Drasgow et al., 1999). A higher score indicates a higher perception of senior leadership as making “honest and reasonable efforts to stop sexual harassment.”

Items 77A-C were utilized in the 1988 DoD Survey of Sex Roles in the Active-Duty Military (1988 SHS), the 1995 Form B (Drasgow et al., 1999), the 2002 WGR (Ormerod et al., 2003) and the 2004 WGR (Ormerod et al., 2004). Alpha coefficients for the Leadership Efforts

to Stop Sexual Harassment Scale (Items 77A-C) were .88 for the total sample, .86 for Women, and .89 for Men (see Table 1). There are no recommendations for modifications to this scale.

Table 25.
Scale Items Measuring Leadership Efforts to Stop Sexual Harassment

<i>Leadership Efforts to Stop Sexual Harassment</i>	
<i>Please give your opinion about whether the persons below make honest and reasonable efforts to stop sexual harassment, regardless of what is said officially.</i>	
77A	Senior leadership of your service
77B	Senior leadership of your installation/ship
77C	Your immediate supervisor

Items 78 and 79, Organizational Climate for Sexual Harassment/Assault and Provision of Resources. In Items 78A-E and 79A-E, survey participants were asked to indicate the extent to which they agreed or disagreed with statements about the climate for sexual harassment and assault in their work group and at their installation/ship (see Table 26). Response options ranged from 1 (*not at all*) to 5 (*very large extent*).

Items 78A-E and 79A-E were rationally categorized into 2 scales, Organizational Tolerance for Sexual Harassment and Assault (Items 78A-E) and Provision of Resources (Items 79A-E). Items 78A-C and 79A-E are reverse coded such that higher scale scores indicate greater individual perceptions of the organizational climate as tolerant of sexual harassment and/or assault and a decreased provision of resources to combat or address sexual harassment and assault.

In the Organizational Tolerance scale, Items 78A-E contain content similar to those found on the 2005 WEOA (Ormerod et al., 2006) but modified to reflect sexual rather than racial/ethnic harassment. Items 78A-E originated from response options found on the Organizational Tolerance of Sexual Harassment scale (OTSH; Hulin, Fitzgerald, & Drasgow, 1996).²⁹ The OTSH assesses the climate for sexual harassment within work groups or larger organizational units by asking participants about their perceptions of contingencies between sexually harassing behavior and organizational responses to a complaint of sexual harassment: whether the reporter would incur risk, be taken seriously, or whether corrective action would be taken. A modified version of the OTSH was employed in the 2002 WGR (Ormerod et al., 2003).

Items 78A-B assess perceptions about the risk involved in complaining about sexual harassment and assault. Item 78C asks if complaints about harassment would be taken seriously. Items 78D-E measure perceptions of whether corrective action would be taken following a complaint. Variants of the items comprising the Provision of Resources scale have been used in

²⁹ The OTSH assesses individual perceptions of organizational tolerance for sexual harassment along scenarios about gender harassment (Crude and Offensive Behavior and Sexist Behavior are subcomponents comprising gender harassment), unwanted sexual attention, and sexual coercion.

previous DMDC surveys including the 1995 *Form B* (Drasgow et al., 1999), the 1996 *EOS* (Palmieri et al., 2001), the 2002 *WGR* (Ormerod et al., 2003), and the 2004 *WGRR* (Ormerod et al., 2004).

Alpha coefficients for the Organizational Tolerance of Sexual Harassment/Assault scale (Items 78A-E) were .78 for the total sample, .81 for women, and .74 for men (see Table 1).

Alpha coefficients for the Provision of Resources scale (Items 79A-E) were .91 for the total sample, women, and men (see Table 1). Recommendations for these scales include rewording items so that no two items are phrased the same. Previous research has shown that items with similar wording may inflate common method bias and increase systematic error in the measurement of the construct (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). Moreover, additional items should be generated for sexual assault and sexual harassment and combined with the previous items to create two separate scales, one for assault and one for harassment. This should improve the interpretability and the psychometric properties of these two scales.

Table 26.
Scale Items Measuring Organizational Climate and Provision of Resources

<i>Organizational Climate for Sexual Harassment/Assault</i>	
78A*	Would members of your work group feel free to report sexual harassment without fear of reprisals?
78B*	Would members of your work group feel free to report sexual assault without fear of reprisals?
78C*	Would complaints about sexual harassment be taken seriously no matter who files them?
78D	Would people be able to get away with sexual harassment if it was reported?
78E	Would people be able to get away with sexual assault if it was reported?
<i>Provision of Resources</i>	
79A*	Are policies forbidding sexual harassment publicized?
79B*	Are complaint procedures related to sexual harassment publicized?
79C*	Are reports of sexual harassment taken seriously?
79D*	Are sexual assault reporting procedures publicized?
79E*	Are reports of sexual assault taken seriously?

^a Reverse Coded

Item 82, Sexual Harassment Training and Education. In Items 82A-G, survey participants were asked to rate the degree to which they agreed or disagreed with statements regarding training and education about sexual harassment (see Table 27). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score indicates that respondents received training and education about sexual harassment.

Items 82A-D and 82F-G were pretested (Ormerod et al., 2001)³⁰ for use in the 2002 WGR (Ormerod et al., 2003). They replaced a similar construct that was assessed in the 1995 Form B.³¹ Originally developed to be used in a training subscale in a measure intended to assess enforcement of sexual harassment policies and procedures, prevention of harassment, provision of resources, and provision of training by one's immediate supervisor, senior leadership, and Service, these items were based on in-depth interviews with enlisted personnel and officers. Item 82E is new to the 2006 WGRA. Items 82A-G assess respondents' perceptions about whether they have received adequate training and education about sexual harassment.

Alpha coefficients were .96 for the total sample, .95 for women, and .96 for men (see Table 1). There are no recommendations for modifications to this scale.

Table 27.
Scale Items Measuring Sexual Harassment Training and Education

<i>Training and Education</i>	
82A	Provides a good understanding of what words and actions are considered sexual harassment
82B	Teaches that sexual harassment reduces the cohesion and effectiveness of my Service as a whole
82C	Identifies behaviors that are offensive to others and should not be tolerated
82D	Gives useful tools for dealing with sexual harassment
82E	Explains the process for reporting sexual harassment
82F	Makes me feel it is safe to complain about unwanted sex-related attention
82G	Provides information about policies, procedures, and consequences of sexual harassment

Item 86, Sexual Assault Training and Education. In Items 86A-G, survey participants were asked to rate the degree to which they agreed or disagreed with statements regarding training and education about sexual assault (see Table 28). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score indicates that respondents endorse receiving training and education about sexual assault.

Item 86A was modified from Item 82A to ask about sexual assault. Items 86B-E were developed for use on the SAGR2006 (Lipari et al., 2006) to assess understanding about the

³⁰ Items 82A-G are slightly modified versions of items used in the *Status of the Armed Forces Surveys Pilot Forms A and B—Gender Issues* surveys. Modifications were made to item content. For example, Item 82A was originally listed as “Has given me a better understanding of what words and actions are considered sexual harassment” in the pretest.

³¹ Although item content was dissimilar, the 1995 Form B assessed a construct that measured whether service members had received training about sexual harassment (Hunter Williams et al., 1999).

various concepts and procedures generally covered in sexual assault training at the Academies.³² The item content was slightly reworded for the 2006 WGRA to reflect whether active duty respondents had received training in various aspects related to sexual assault.³³ Items 82F-G are new to the 2006 WGRA and are specific to active duty personnel. Items 86A-G assess respondents' perceptions about whether they have received adequate training and education about sexual assault.

Alpha coefficients were .97 for the total sample, women, and men (see Table 1). There are no recommendations for modifications to this scale.

Table 28.
Scale Items Measuring Sexual Assault Training and Education

<i>Training and Education</i>	
86A	Provides a good understanding of what words and actions are considered sexual assault
86B	Teaches how to avoid situations that might increase the risk of sexual assault
86C	Teaches how to obtain medical care following a sexual assault
86D	Explains the role of chain-of-command in handling sexual assaults
86E	Explains the reporting options available if sexual assault occurs
86F	Identifies the points of contact for reporting sexual assault (e.g., SARC, Victim Advocate)
86G	Explains how sexual assault is a mission readiness problem

³² In the SAGR2006, these items asked about whether respondents understood aspects of training and had three response options (“yes,” “no,” “not sure”).

³³ For example, in the SAGR2006, Item 86E was originally listed as two separate items, “How to report sexual assault” and “The difference between restricted and unrestricted reporting of sexual assault.”

Discussion

The 2006 *WGRA* continues the tradition of utilizing state-of-the-art measures and procedures to assess unwanted, gender-related behaviors and workplace relations in military populations. This survey of active duty members incorporated significant additions and revisions to the 2002 *WGR* survey. Most prominent among these was the addition of a section assessing experiences of unwanted sexual contact. Included were a detailed series of questions asking about the context surrounding the one situation involving unwanted sexual contact that had the greatest effect on the respondent, and questions about help-seeking and the reporting process. As in the previous *WGR* surveys, included was the DoD Sexual Harassment Core Measure, which allows for a uniform approach to counting incidences. Also included were an array of correlate measures, which allow for increased understanding about workplace relations and the assessment of the antecedents and consequences of unwanted, gender-related behaviors.

This report provides details about scales constructed from the 2006 *WGRA*. The major scales in this report have psychometric support and a history of being useful with military populations. Of those scales formed via an iterative method of analyzing items for both content and statistical homogeneity, such composites have a strong justification. However, other researchers may find that variables defined in terms of different sets of items are preferable. In addition, there is no inherent problem in considering alternative multi-item composites, if the alternate composite is theoretically justified with adequate reliability.

In sum, the 2006 *WGRA* produced an extraordinarily rich set of data for the study of workplace and gender relations. Reliable and valid measures of workplace variables, including unwanted, gender-related behaviors and unwanted sexual contact, were collected from a diverse sample of active duty members. These data substantially further the scientific understanding of workplace relations and unwanted, gender-related behavior, and will enable policy makers to make more informed decisions about how to address such issues in the Armed Forces.

References

- Arvey, R. D., & Cavanaugh, M. A. (1995). Using surveys to assess the prevalence of sexual harassment: Some methodological problems. *Journal of Social Issues, 51*, 117-138.
- Bastian, L. D., Lancaster, A. R., & Reyst, H. E. (1996). *Department of Defense 1995 sexual harassment survey*. Arlington, VA: DMDC.
- Bentler, P. M. (1995). *EQS structural equations program manual*. Encino, CA: Multivariate Software.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.
- Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Cohen, S., & Williamson, G.M. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Social Psychology of Health: Claremont Symposium on Applied Social Psychology*. Newbury Park, CA: Sage.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*, 98-104.
- Cortina, L. M., & Magley, V. J. (2003). Raising voice, risking retaliation: Events following interpersonal mistreatment in the workplace. *Journal of Occupational Health Psychology, 8*, 247-265.
- DMDC. (2004). *Workplace and Gender Relations Survey of Reserve Component Member: Codebook* (Report No. 2004-021). Arlington, VA: Author.
- DMDC. (2007a). *2006 Workplace and Gender Relations Survey of Active Duty Members: Administration, datasets, and codebook* (Report No. 2007-021). Arlington, VA: DMDC.
- DMDC. (2007b). *2006 Workplace and Gender Relations Survey of Active Duty Members: Statistical methodology report* (Report No. 2007-023). Arlington, VA: DMDC.
- Drasgow, F., Fitzgerald, L. F., Magley, V. J., Waldo, C. R., & Zickar, M. J. (1999). *The 1995 Armed forces sexual harassment survey: Report on scales and measures* (Report No. 98-004). Arlington, VA: DMDC.
- Edwards, J. E., Elig, T. W., Edwards D. L., & Riemer, R. A. (1997). *The 1995 Armed Forces Sexual Harassment Survey: Administration, datasets, and codebook for Form B* (Report No. 95-015). Arlington, VA: DMDC.
- Fitzgerald, L. F., Drasgow, F., & Magley, V. J. (1999). Sexual harassment in the Armed Forces: A test of an integrated model. *Military Psychology, 11*, 329-343.

- Fitzgerald, L. F., Gelfand, M. J., & Drasgow, F. (1995). Measuring sexual harassment: Theoretical and psychometric advances. *Basic and Applied Social Psychology*, 17, 425-445.
- Fitzgerald, L. F., Magley, V. J., Drasgow, F., & Waldo, C. R. (1999). Measuring sexual harassment in the military: The Sexual Experiences Questionnaire (SEQ-DoD). *Military Psychology*, 3, 243-264.
- Fitzgerald, L. F., Shullman, S., Bailey, N., Richards, M., Swecker, J., Gold, Y., Ormerod, A. J., & Weitzman, L. (1988). The incidence and dimensions of sexual harassment in academia and the workplace. *Journal of Vocational Behavior*, 32, 152-175.
- Folkman, S., & Lazarus, R.S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.
- Gelfand, M. J., Fitzgerald, L. F., & Drasgow, F. (1995). The structure of sexual harassment: A confirmatory factor analysis across cultures and settings. *Journal of Vocational Behavior*, 47, 164-177.
- Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In R. H. Hoyle (Ed.), *Structural equation modeling: Issues, concepts, and applications* (pp. 1-15). Newbury Park, CA: Sage.
- Hu, L. & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3, 424-453.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Hu, L., Bentler, P. M., Kano, Y. (1992). Can test statistics in covariance structure analysis be trusted? *Psychological Bulletin*, 112, 351-362.
- Hulin, C. L., Fitzgerald, L. F., & Drasgow, F. (1996). Organizational influences on sexual harassment. In M. S. Stockdale (Ed.), *Sexual harassment in the workplace: Perspectives, frontiers, and response strategies* (pp. 127-150). Thousand Oaks, CA: Sage.
- Hunter Williams, J., Fitzgerald, L. F., & Drasgow, F. (1999). The effects of organizational practices on sexual harassment and individual outcomes in the military. *Military Psychology*, 11, 303-328.
- Idaszak, J. R., & Drasgow, F. (1987). A revision of the Job Diagnostic Survey: Elimination of a measurement artifact. *Journal of Applied Psychology*, 72, 69-74.
- Joreskog, K. & Sorbom, D. (1993). *Structural equation modeling with the SIMPLIS command language*. Hillsdale, NJ: Scientific Software International.

- Klem, L. (2000). Structural equation modeling. In L. G. Grimm and P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 227-260). Washington, DC: American Psychological Association.
- Lancaster, A. (1999). Department of Defense sexual harassment research: Historical perspectives and new initiatives. *Military Psychology, 11*, 219-231.
- Lipari, R. N., Wessels, K. K., Cook, P. J., Jones, A. J., Pennington, J. C., & Kidwell, E. A. (2006). *Service Academy 2006 Gender Relations Survey* (DMDC Report No. 2006-016). Arlington, VA: DMDC.
- Magley, V. J., Waldo, C. R., Drasgow, F., & Fitzgerald, L. F. (1999). The impact of sexual harassment on military personnel: Is it the same for men and women? *Military Psychology, 11*, 283-302.
- Mazzeo, S. E., Bergman, M. E., Buchanan, N. T., Drasgow, F., & Fitzgerald, L. F. (2001). Situation-specific assessment of sexual harassment. *Journal of Vocational Behavior, 59*, 120-131.
- McDonald, R. P., & Marsh, H. W. (1990). Choosing a multivariate model: Noncentrality and goodness of fit. *Psychological Bulletin, 107*, 247-255.
- Meyer, J. P. & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*, 223-247.
- Near, J. P., & Miceli, M. P. (1986). Retaliation against whistle blowers: Predictors and effects. *Journal of Applied Psychology, 71*, 137-145.
- Ormerod, A. J., Lawson, A. K., Sims, C. S., Lytell, M. C., Wadlington, P. L., Yaeger, D. W., Wright, C. V., Reed, M. E., Lee, W. C., Drasgow, F., Fitzgerald, L. F., & Cohorn, C. A. (2003). *2002 Status of the Armed Forces Surveys - Workplace and Gender Relations: Report of Scales and Measures* (Report No. 2002-031). Arlington, VA: DMDC.
- Ormerod, A. J., Lee, W. C., Fitzgerald, L. F., & Drasgow, F. (2001). *The 2000 Armed Forces Sexual Harassment Survey: Report of scales and measures of the Y2K Pilot Survey* (Report No. 2001-004). Arlington, VA: DMDC.
- Ormerod, A. J., Lawson, A. K., Lytell, M. C., Wright, C. V., Nye, C., Perry, L. A., Drasgow, F., Fitzgerald, L. F., Kusnir, C., & Rynczak, D. (2006). *2005 Workplace and Equal Opportunity Survey of Active Duty Members: Report on Scales and Measures* (Report No. 2007-004). Arlington, VA: DMDC.

- Ormerod, A. J., Lawson, A. K., Lytell, M. C., Wright, C. V., Sims, C. S., Brummel, B. J., Drasgow, F., Lee, W. C., & Fitzgerald, L. F. (2004). *2004 Workplace and Gender Relations Survey of Reserve Component Members: Report on Scales and Measures* (Report No. 2004-022). Arlington, VA: DMDC.
- Palmieri, P. A., Drasgow, F., Ormerod, A. J. (2001). *The 1996 Armed Forces Equal Opportunity Survey: Report on scales and measures* (Contract No. DASW01-97-C-0076). Arlington, VA: Defense Manpower Data Center.
- Parmerlee, M. A., Near, J. P., & Jensen, T. C. (1982). Correlates of whistleblowers' perceptions of organizational retaliation. *Administrative Science Quarterly*, 27, 17-34.
- Podsakoff, P. M., Mackenzie, S. B., Lee, J. L., & Podsakoff, N. P. (2003). Common method biases in behavior research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.
- Roznowski, M. (1989). Examination of the measurement properties of the Job Descriptive Index with experimental items. *Journal of Applied Psychology*, 74, 805-814.
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8, 350-353.
- Siebold, G. L., & Lindsay, T. J. (1999). The relation between demographic descriptors and soldier-perceived cohesion and motivation. *Military Psychology*, 11, 109-128.
- Smith, P. C., Kendall, L., & Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.
- Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology*, 13, 693-713.
- Stark, S., Chernyshenko, O. S., Lancaster, A. R., Drasgow, F., Fitzgerald, L. F. (2002). Toward standardized measurement of sexual harassment: Shortening the SEQ-DoD using item response theory. *Military Psychology*, 14, 49-72.
- Steiger, J. H., & Lind, J. C. (1980, May). Statistically-based tests for the number of common factors. Paper presented at the annual meeting of the Psychonomic Society, Iowa City, IA.
- Survey Method for Counting Incidents of Sexual Harassment (2002, April 28). Washington, DC: Office of the Under Secretary of Defense for Personnel and Readiness.
- Survey Results—Zero Defect and Related Measures (2002, September). Washington, DC: Office of the Under Secretary of Defense for Personnel and Readiness.
- Swan, S. (1997). Explaining the job-related and psychological consequences of sexual harassment in the workplace: A contextual model. *Dissertation Abstracts International*, 58, 3371.

- Tucker, L. R. & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1-10.
- U.S. Merit Systems Protection Board. (1981). *Sexual harassment in the federal workplace: Is it a problem?.* Washington, DC: US. Government Printing Office.
- U.S. Merit Systems Protection Board. (1987). *Sexual harassment in the federal government: An update.* Washington, DC: US. Government Printing Office.
- Ware, J. E. & Sherbourne, C. D. (1992). The MOS 36-item short form health survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 30, 473-483.
- Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). *Manual for the Minnesota Satisfaction Questionnaire.* Minneapolis: University of Minnesota, Industrial Relations Center.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Issues, concepts, and applications* (pp. 56-75). Newbury Park, CA: Sage.
- Willis, E. J., Mohamed, S. G., Lipari, R. N. (2002). *2002 Status of the Armed Forces Surveys—Workplace and Gender Relations: Administration, datasets, and codebook* (Report No. 2002-010). Arlington, VA: DMDC.

Appendix A.
Explanation and Table of Fit Indices for
Factor Analysis Models

Explanation and Table of Fit Indices for Factor Analysis Models

A number of issues were considered while compiling the results of these analyses and providing the recommendations contained in this document. Of great concern was the factor structure of certain scales. Using factor analysis, we were able to identify items that represent a single construct of interest (e.g., coworker satisfaction). Likewise, using this approach, an item may be a candidate for removal from the scale if it is not found to load highly on the construct. Our strategy was to use *confirmatory factor analysis* (CFA, see Byrne, 1998) to validate *a priori* assumptions regarding the items comprising each scale and subscale (i.e., to see if such items really measure a single construct). Ultimately, these recommendations were made on the basis of our interpretation of these results combined with item-level analyses and practical issues.

Fit Indices and Confirmatory Factor Analysis

A priori assumptions regarding the composition of a scale are tested with CFA through the delineation of a *measurement model*, which stems from the literature on *structural equation modeling* (SEM, Byrne, 1998). Such models are evaluated against the data based on *goodness of fit measures* or *fit indices*. Due to a number of complex issues, a considerable amount of caution should be used when interpreting these fit indices.

Table 29.
Commonly Cited Indices in CFA/SEM

<i>Commonly Cited Indices in CFA/SEM</i>		
	<i>Index</i>	<i>Relevant Reference</i>
χ^2	Chi-squared statistic	Byrne, 1998
CFI	Common Fit Index	Bentler, 1990
NNFI	Non-Normed Fit Index	Tucker & Lewis, 1973
GFI	Goodness-of-Fit Index	Joreskog & Sorbom, 1993
AGFI	Adjusted Goodness-of-Fit Index	Joreskog & Sorbom, 1993
RMSEA	Root-Mean-Squared Error of Approximation	Steiger & Lind, 1980
SRMR	Standardized Root-Mean-Squared Residual	Bentler, 1995

Some researchers advocate the use of “rules of thumb” or cutoffs for fit indices in the SEM framework. For example, Hoyle (1995) suggests a minimum value of .90 for a scale to be considered a good “fit” for the CFI and the NNFI. More recently, Hu and Bentler (1998; 1999) have recommended a minimum value of .95 for the NNFI and CFI, as well as a maximum value of .05 for the RMSEA and the SRMR.

Although it may seem practical to use cutoffs such as these for fit statistics, problems with their use are apparent. One well-known problem is the influence of sample size on the χ^2 statistic, a common “goodness of fit” measurement. Hu and Bentler (1998), as well as others,

have shown that the χ^2 statistic is subject to a systematic bias (error), such that its expected value is a function of sample size. Hence, models appear to fit better in smaller samples and a large χ^2 statistic will inevitably result when a large data set is analyzed. A variety of adjustments to the χ^2 statistic have been made in an attempt to obtain fit indices less dependent on sample size. However, a more intractable problem concerns violations of multivariate normality often associated with observed data. Severe violations of this assumption affect the interpretability of a number of indices (e.g., RMSEA, CFI, NNFI, GFI, and AGFI), which leads to the over-rejection of plausible models (West, Finch, & Curran, 1995).

Additionally, commonly used estimation methods such as Maximum Likelihood Estimation (MLE) and Generalized Least Squares Estimation (GLS) operate under assumptions that may not be reflected in the data. For example, both methods assume that variables in the dataset are normally distributed and continuous. Indeed, violations of these assumptions are common. Many researchers often point to asymptotic robustness theory as a justification for ignoring violations of a continuous, normal distribution.” Unfortunately, as Hu, Bentler, and Kano (1992) state, “nothing is known about the robustness of the asymptotic robustness theory” (p. 352).

Knowledge regarding violations of multivariate normality is somewhat limited. In one study, Hu and Bentler (1998) tested various fit statistics using different sample sizes of data that violated multivariate normality by having extreme kurtosis (i.e., highly “peaked” or nearly “flat” distributions) and, for some of their samples, factors and errors that were dependent on each other. Based on their overall results, they concluded that the SRMR performed better than the other indices studied. Unfortunately, Hu and Bentler did not consider other common distributions, such as discrete item responses that are highly skewed. In sum, the violations of assumptions examined in the available literature bear little resemblance to some of the violations encountered in real-world data, such as those collected for the *2004 WGRR*.

The Bottom Line on Cutoffs

Recommended cutoffs for fit indices are based on the ideal situation in which all assumptions are met. Unfortunately, such situations are not often found in practice. For example, item-level data from the *2004 WGRR* may include few response options or some items may be heavily skewed. Thus, any such advocated “rules of thumb” in the available literature on these topics should be viewed with caution. Even considering the violations of certain assumptions, Hu and Bentler (1998) noted that “it is difficult to designate a specific cutoff value for each fit index because it does not work equally well with various types of fit indices, sample sizes, estimators, or distributions” (p. 449).

To provide a concrete example of the problems encountered when applying typical “rules of thumb” to real-world data we turn to the Job Descriptive Index (Smith, Kendall, & Hulin, 1969), a heavily used and well-validated measure of job satisfaction (Roznowski, 1989). Although its subscales are widely recognized as essentially unidimensional, when a single-factor CFA is fit to the raw data, the fit statistics range in the .80’s, which is clearly below the cutoffs discussed above. This may not be completely surprising given the three option response format of the JDI (“Yes - ? - No”). That said, when item parcels (i.e., sums of three or more items) are utilized in the analysis, the fit statistics improve dramatically. One of the solutions proposed by

West and his colleagues (1995) for non-normal variables is to use item parcels, specifically because these parcels tend to have distributions that more closely approximate the normal distribution assumed for SEM. Unfortunately, although this tactic is useful in a full SEM, it is not useful when using SEM or CFA in this context, due to the need to evaluate individual items.

To sum up, Byrne (1998) suggests taking a holistic approach when evaluating SEM models, examining fit statistics but not neglecting other important features that indicate the acceptability of the model, such as the plausibility of parameter estimates and the size of standard errors. Given the current state of knowledge regarding SEM with discrete item response data, it is necessary to consider all aspects of model fit rather than to rely solely on “rule-of-thumb” guidelines for fit statistics. Often, a researcher must accumulate and rely on experience in SEM applications to determine an appropriate “good” fit statistic for a particular type of data. McDonald and Marsh (1990) noted that “although experience can suggest a recommendable cutoff point for use by those who fear the ‘subjectivity’ of judgment, such a cutoff point must itself remain inevitably subjective as only the saturated model is true (p.254).”

Factors Considered When Making Recommendations

Many factors were considered when we made our recommendations, such as the results from the item-level analyses. Corrected item-total correlations and coefficient alpha-if-item-deleted were examined, and individual items were eliminated if there was a clear “outlier” item (e.g., Item 17D, discussed in the 2002 WGR Scales and Measures report; Ormerod et al., 2003). Unfortunately, as with the cutoffs associated with fit indices in CFA, similar “rules-of-thumb” should be avoided with item-total correlations and coefficient alpha. Schmitt (1996) describes proper use of coefficient alpha and states that “[t]here is no sacred level of acceptable or unacceptable level of alpha... measures with (by conventional standards) low levels of alpha may still be quite useful” (p. 353). The reasons behind this position are, in part, due to the fact that coefficient alpha is influenced by a number of factors, including the homogeneity of the items as well as the number of items in the scale (Cortina, 1993). These characteristics and others make it difficult to justify the use of cutoffs. Additionally, the measures of interest in this report are often short and heterogeneous (leading to lower observed values for coefficient alpha). However, the value of .70 for coefficient alpha is a standard performance criteria, adopted by the DMDC survey program, which represents the lowest allowable limit in working with the 2004 WGR.

As mentioned before, our recommendations were also driven by the results of the CFA’s for each scale. Based on documentation from DMDC and our own research and hypotheses, we tested measurement models for each scale and, when plausible, tested alternatives (e.g., Items 44 and 18 in the 2002 WGR Scales and Measures report; Ormerod et al., 2003). Again, the use of cutoffs was avoided, and the suggested treatment of scales and subscales are delineated in the text of the report.

A primary practical consideration throughout this process was the need to retain scales of interest as much as possible. The use of rigid rules (e.g., .95 cutoff for the CFI and NNFI, etc.) would not only have been inappropriate, but would have deleted a substantial number of important scales. We also realize that some of these scales were pieced together from a wide range of sources, including single items, scales under development, and scales adapted for use in

this context. In some cases, we suggested that the text of certain items or the treatment of scales/subscales from the 2004 *WGRR* be revised (e.g., Item 18 in the 2002 *WGR* Scales and Measures report; Ormerod et al., 2003).

In short, the results and interpretations of the factor and item-level analyses were balanced with practical considerations. Although there is always subjectivity in the interpretation of these analyses, we feel as though we have carefully documented the rational for our recommendations throughout this report. The table that follows documents the results of the CFA's for each scale.

Table 30.
Fit Indices for Factor Analysis Models

Model	Effective Sample	Adjusted Chi-Square ^a	DF	Adjusted Chi-Square/DF ^b	RMSEA	NNFI	SRMR	GFI	AGFI	CFI
Organizational Commitment (1 factor) Total Sample	24965	1324.57	77	17.20	0.22	0.76	0.15	0.65	0.52	0.80
Men	17624	1322.63	77	17.18	0.22	0.76	0.15	0.65	0.53	0.79
Women	7323	1324.69	77	17.20	0.22	0.78	0.15	0.65	0.52	0.81
Affective, Continuance, and Normative Commitment (3 factors) Total Sample	24965	498.87	74	6.74	0.11	0.92	0.10	0.88	0.83	0.93
Men	17624	492.72	74	6.66	0.11	0.91	0.10	0.88	0.83	0.93
Women	7323	511.32	74	6.91	0.12	0.92	0.10	0.88	0.82	0.93
Perceived Safety from Sexual Harassment (1 factor) Total Sample	19218	1504.79	27	55.73	0.36	0.87	0.03	0.57	0.28	0.90
Men	14765	2235.01	27	82.78	0.41	0.82	0.03	0.50	0.17	0.87
Women	4439	962.70	27	35.66	0.27	0.89	0.06	0.69	0.48	0.92
Perceived Safety from Sexual Harassment (2 factors) Total Sample	19218	882.67	26	33.95	0.26	0.92	0.03	0.71	0.50	0.94
Men	14765	1347.79	26	51.84	0.30	0.89	0.03	0.66	0.40	0.92
Women	4439	533.60	26	20.52	0.21	0.94	0.05	0.80	0.66	0.96
Perceived Safety from Sexual Assault (1 factor) Total Sample	18894	1178.14	27	43.63	0.31	0.91	0.02	0.64	0.40	0.93
Men	14526	1648.10	27	61.04	0.36	0.87	0.01	0.57	0.28	0.91
Women	4352	890.34	27	32.98	0.26	0.91	0.04	0.72	0.53	0.93
Perceived Safety from Sexual Assault (2 factors) Total Sample	18894	710.40	26	27.32	0.24	0.94	0.01	0.75	0.57	0.96
Men	14526	968.68	26	37.26	0.27	0.92	0.01	0.70	0.49	0.95
Women	4352	543.11	26	20.89	0.21	0.94	0.03	0.80	0.66	0.96

Model	Effective Sample	Adjusted Chi-Square ^a	DF	Adjusted Chi-Square/DF ^b	RMSEA	NNFI	SRMR	GFI	AGFI	CFI
Other Responsibility for SH/SA (1 factor) Total Sample	25777	94.90	5	18.98	0.18	0.79	0.10	0.94	0.81	0.89
Men	18204	75.15	5	15.03	0.16	0.84	0.09	0.95	0.85	0.92
Women	7554	94.75	5	18.95	0.18	0.77	0.10	0.94	0.81	0.88
Supervisor Satisfaction (1 factor) Total Sample	25915	64.49	9	7.17	0.11	0.98	0.01	0.96	0.91	0.99
Men	18285	66.53	9	7.39	0.12	0.98	0.02	0.96	0.91	0.99
Women	7610	61.51	9	6.83	0.11	0.98	0.01	0.97	0.92	0.99
Careerism (1 factor) Total Sample	25927	92.27	5	18.45	0.18	0.88	0.07	0.94	0.81	0.94
Men	18290	94.83	5	18.97	0.19	0.87	0.07	0.94	0.81	0.94
Women	7617	71.92	5	14.38	0.16	0.91	0.06	0.95	0.85	0.96
Coworker Satisfaction (1 factor) Total Sample	25799	27.19	5	5.44	0.09	0.98	0.02	0.98	0.95	0.99
Men	18215	25.16	5	5.03	0.09	0.98	0.02	0.98	0.95	0.99
Women	7584	31.52	5	6.30	0.10	0.98	0.02	0.98	0.94	0.99
Work Satisfaction with Item 26F (1 factor) Total Sample	25816	34.44	9	3.83	0.08	0.99	0.02	0.98	0.96	0.99
Men	18252	32.62	9	3.62	0.07	0.99	0.01	0.98	0.96	0.99
Women	7564	40.44	9	4.49	0.09	0.98	0.02	0.98	0.95	0.99
Work Satisfaction without Item 26F (1 factor) Total Sample	25860	27.06	5	5.41	0.10	0.98	0.02	0.98	0.95	0.99
Men	18281	24.65	5	4.93	0.09	0.98	0.01	0.98	0.95	0.99
Women	7579	33.50	5	6.70	0.11	0.98	0.02	0.98	0.93	0.99
Perceived Stress (1 factor) Total Sample	25356	441.00	35	12.60	0.17	0.87	0.09	0.83	0.73	0.90
Men	17911	464.29	35	13.27	0.18	0.85	0.10	0.82	0.71	0.88
Women	7445	385.54	35	11.02	0.16	0.90	0.08	0.85	0.76	0.92

Model	Effective Sample	Adjusted Chi-Square ^a	DF	Adjusted Chi-Square/DF ^b	RMSEA	NNFI	SRMR	GFI	AGFI	CFI
Perceived Stress (2 factors – substantive & method)										
Total Sample	25356	192.07	34	5.65	0.10	0.95	0.05	0.93	0.89	0.96
Men	17911	193.77	34	5.70	0.10	0.94	0.05	0.93	0.89	0.96
Women	7445	186.49	34	5.49	0.10	0.95	0.05	0.93	0.89	0.97
Sex Discrimination (1 factor) Total Sample	25200	1299.13 ^c	54	24.06 ^c	0.02	0.91 ^c	0.05	0.70 ^c	0.56 ^c	0.93 ^c
Men	17783	2261.98 ^c	54	41.89 ^c	0.02	0.86 ^c	0.05	0.64 ^c	0.48 ^c	0.88 ^c
Women	7417	1295.74 ^c	54	24.00 ^c	0.04	0.90 ^c	0.06	0.70 ^c	0.57 ^c	0.92 ^c
Sex Discrimination (3 factors) Total Sample	25200	481.26 ^c	51	9.44 ^c	0.01	0.97 ^c	0.04	0.88 ^c	0.82 ^c	0.98 ^c
Men	17783	1357.26 ^c	51	26.61 ^c	0.01	0.91 ^c	0.04	0.80 ^c	0.70 ^c	0.93 ^c
Women	7417	478.03 ^c	51	9.37 ^c	0.02	0.96 ^c	0.05	0.88 ^c	0.81 ^c	0.97 ^c
Unwanted, Gender-Related Behaviors Scales (4 factors, no SA items, no Item 35Q, Item 35B crossloading)										
Total Sample	24536	1409.25 ^c	97	14.53 ^c	0.02	0.96 ^c	0.04	0.74 ^c	0.64 ^c	0.96 ^c
Men	17304	624.18 ^c	97	6.43 ^c	0.02	0.98 ^c	0.03	0.88 ^c	0.83 ^c	0.98 ^c
Women	7232	1151.02 ^c	97	11.87 ^c	0.02	0.96 ^c	0.04	0.78 ^c	0.69 ^c	0.97 ^c
Unwanted, Gender-Related Behaviors Scales (4 factors, no SA items, Item 35B crossloading) Total Sample	24388	1539.86 ^c	112	13.75 ^c	0.02	0.96 ^c	0.04	0.74 ^c	0.64 ^c	0.97 ^c
Men	17210	674.95 ^c	112	6.03 ^c	0.02	0.98 ^c	0.03	0.88 ^c	0.83 ^c	0.98 ^c
Women	7178	1319.29 ^c	112	11.78 ^c	0.02	0.96 ^c	0.04	0.77 ^c	0.69 ^c	0.97 ^c
Unwanted, Gender-Related Behaviors Scales (4 factors, no SA items, Items 35B and 35Q crossloading) Total Sample	24388	1521.68 ^c	111	13.71 ^c	0.02	0.96 ^c	0.04	0.74 ^c	0.64 ^c	0.97 ^c
Men	17210	671.70 ^c	111	6.05 ^c	0.02	0.98 ^c	0.03	0.88 ^c	0.83 ^c	0.98 ^c
Women	7178	1271.35 ^c	111	11.45 ^c	0.02	0.96 ^c	0.04	0.78 ^c	0.69 ^c	0.97 ^c
Subjective Distress (2 factors) Total Sample	9840	189.43	8	23.68	0.22	0.88	0.07	0.89	0.70	0.94
Men	5168	230.89	8	28.86	0.24	0.84	0.09	0.87	0.66	0.92
Women	4672	143.56	8	17.94	0.19	0.91	0.06	0.91	0.76	0.95

Model	Effective Sample	Adjusted Chi-Square ^a	DF	Adjusted Chi-Square/DF ^b	RMSEA	NNFI	SRMR	GFI	AGFI	CFI
Subjective Distress (2 factors, Item 38E crossloading) Total Sample	9840	57.23	7	8.18	0.12	0.96	0.03	0.97	0.90	0.98
Men	5168	54.05	7	7.72	0.12	0.96	0.04	0.97	0.91	0.98
Women	4672	54.10	7	7.73	0.12	0.96	0.03	0.97	0.91	0.98

Note. The Effective Sample is the *n* remaining after listwise deletion for missing data. The *N* for the overall sample was 27,778, 14,201 for the women, and 13,577 for the men before listwise deletion.

Note. DF = degrees of freedom; RMSEA = root mean square error of approximation; NNFI = non-normed fit index; SRMR = standardized root mean square residual; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; CFI = comparative fit index.

^aThis is adjusted chi-square. To improve interpretability, the observed chi-square was adjusted to that expected in a sample of *N*=500.

^bThis is the adjusted chi-square to degrees of freedom ratio.

^cDiagonally weighted least squares estimation was used to estimate model parameters and RMSEA and SRMR are the most appropriate indices to determine goodness of fit.

Appendix B.
Acronyms Utilized in the Report on Scales
and Measures

Acronyms Utilized in the Report on Scales and Measures

Acronym	Explanation
<i>1988 SHS</i>	<i>1988 DoD Survey of Sex Roles in the Active-Duty Military</i>
<i>1995 Form B</i>	<i>1995 Armed Forces Sexual Harassment Survey</i>
<i>1996 EOS</i>	<i>1996 Equal Opportunity Survey</i>
<i>2002 WGR</i>	<i>2002 Status of the Armed Forces Survey – Workplace and Gender Relations</i>
<i>2004 WGRR</i>	<i>2004 Workplace and Gender Relations Survey of Reserve Component Members</i>
<i>2005 WEOA</i>	<i>2005 Workplace and Equal Opportunity Survey of Active-Duty Members</i>
<i>2006 WGRA</i>	<i>2006 Workplace and Gender Relations Survey of Active Duty Personnel</i>
ASVAB	Armed Services Vocational Aptitude Battery
CFA	Confirmatory Factor Analysis
DASD[EO]	Deputy Assistant Secretary of Defense for Equal Opportunity
DMDC	Defense Manpower Data Center
DOD	Department of Defense
EO	Equal Opportunity
FS	Feelings Scale
GLS	Generalized Least Squares Estimation
JDI	Job Descriptive Index
JSS	Job Satisfaction Survey
MDS	Multidimensional Scaling
MLE	Maximum Likelihood Estimation
OTSH	Organizational Tolerance for Sexual Harassment
OUSD[P&R]	Office of the Under Secretary of Defense for Personnel and Readiness
PSS10	10-item Perceived Stress Scale
<i>SAGR2006</i>	<i>Service Academy 2006 Gender Relations Survey</i>
SEM	Structural Equation Modeling
SEQ	Sexual Experiences Questionnaire
SF-36	Short-Form Health Survey
<i>March 2003 SOFR</i>	<i>March 2003 Status of Forces Survey</i>
UCMJ	Uniform Code of Military Justice
USMSPB	U. S. Merit Systems Protection Board

Appendix C.

Survey Instrument

REPORT DOCUMENTATION PAGE					<i>Form Approved OMB No. 0704-0188</i>	
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14. ABSTRACT This report documents the scale development process and properties for the 2006 Workplace and Gender Relations Survey of Active Duty Members (WGRA2006). This report describes advances from previous surveys and presents results on scale development as obtained from respondents to this survey. The body of the report is comprised of a description of each scale, including individual items, background information, and psychometric analyses. Statistics are reported for men and women combined and by gender.						
15. SUBJECT TERMS Survey, Reserve Component Members, Demographics, Satisfaction and Retention Intention, Military Workplace, Well-being, Race/Ethnic Harassment, Race/Ethnic Discrimination, Personnel Policies and Practices, and Training.						
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